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OCEAN TO OCEAN

J.W.G.WALKER, U.S.N.



Scallop

OCEAN TO OCEAN







HEAD OF RIO CHICO.

OCEAN TO OCEAN

AN ACCOUNT
PERSONAL AND HISTORICAL
OF
NICARAGUA AND ITS PEOPLE



BY
J. W. G. WALKER, U. S. N.

With illustrations from original photographs and maps

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A. C. McCLURG & CO.
1902

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PREFATORY NOTE.

DURING the year 1898 the author was employed, under the direction of the Nicaragua Canal Commission, in surveying the belt of country available for canal construction between Lake Nicaragua and the Pacific Ocean. This little volume is the outgrowth of that visit to the country. It does not pretend to literary excellence, nor does it purport to treat exhaustively the subjects touched upon, but aims rather to give a correct idea of the country and people, and to afford in a compact form such other information as the general reader may desire.

While an Isthmian Canal now seems assured, it is impossible at the present time to tell whether the Nicaragua or Panama route will finally be chosen. The construction of a canal at either location is perfectly practicable, and if the works of the Panama Company were acquired for \$40,000,000 the cost of completing the two channels would be practically the same. The chief disadvantage of the Nicaragua route is the cost of operation and maintenance, which is estimated at \$3,300,000

per annum, or \$1,300,000 more than the Panama route. Whether it should be chosen in preference to its rival seems to depend, therefore, upon whether it possesses superior advantages worth securing at this excess annual expenditure.

These advantages are, briefly, as follows.

A saving of from one to two days upon all trans-isthmian commerce except that originating or ending upon the west coast of South America. The commerce thus benefited includes that between the Atlantic and Pacific coasts of the United States, which, being coastwise trade protected by law from foreign competition, is of special importance to the American people.

More favorable hygienic conditions at Nicaragua, indicating less loss of life during construction, and less liability to commercial loss after completion, from the quarantine of vessels.

The possibility of developing large portions of Nicaragua and Costa Rica, and of establishing, during the period of construction, intimate business relations which would benefit our manufacturing, agricultural, and other interests. The Panama Canal would be merely a means of communication between the two oceans.

An average saving of about nine days for sailing ships in reaching and leaving the termini, due to the prevalence of trade winds

not felt at Panama. It is probable that for many years to come considerable slow moving freight will be transported by large five-masted schooners, manned by small crews, and this class of shipping should therefore receive due consideration.

It is estimated that with a proper system of tolls the revenues of either canal would greatly exceed the cost of maintenance and operation, but would not be sufficient to pay a fair rate of interest upon the capital invested. If, therefore, the canal is regarded as a business venture, the Panama location is unquestionably preferable; but if it is regarded as a means of benefiting mankind, and particularly the citizens of the United States, the Nicaragua route has many strong claims to consideration.

In the preparation of this volume, numerous official reports and standard treatises were consulted, notably the works of Squier, Belt, and Keasebey.

Thanks are due to Messrs. W. V. Alford, D. H. Baldwin, G. W. Brown, Fred Davis, and H. W. Durham, for photographs loaned, and to Mr. E. B. Harden for much valuable aid and encouragement.

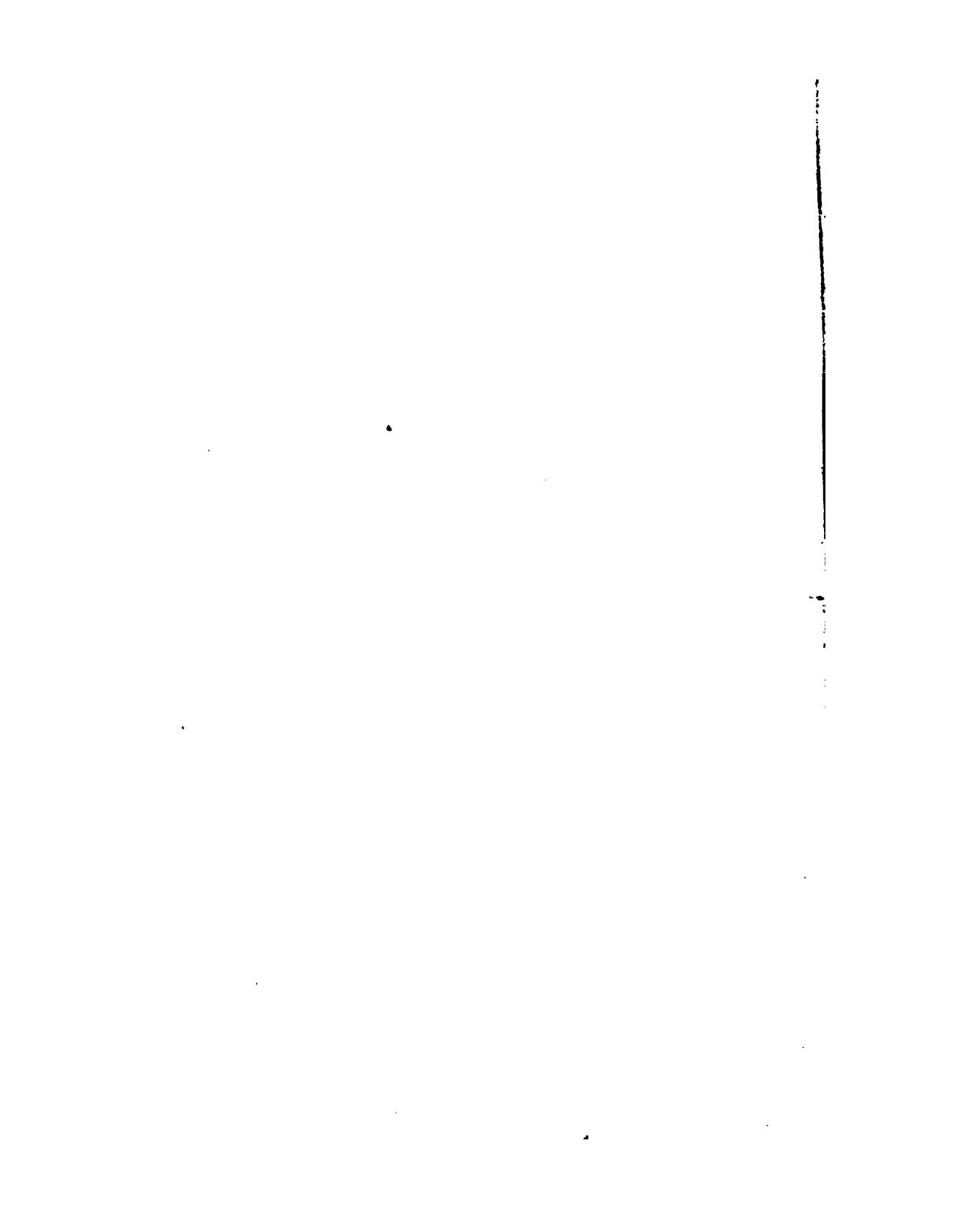
J. W. G. WALKER.

U. S. NAVY YARD,
CHARLESTOWN, MASS., Jan. 20, 1902.



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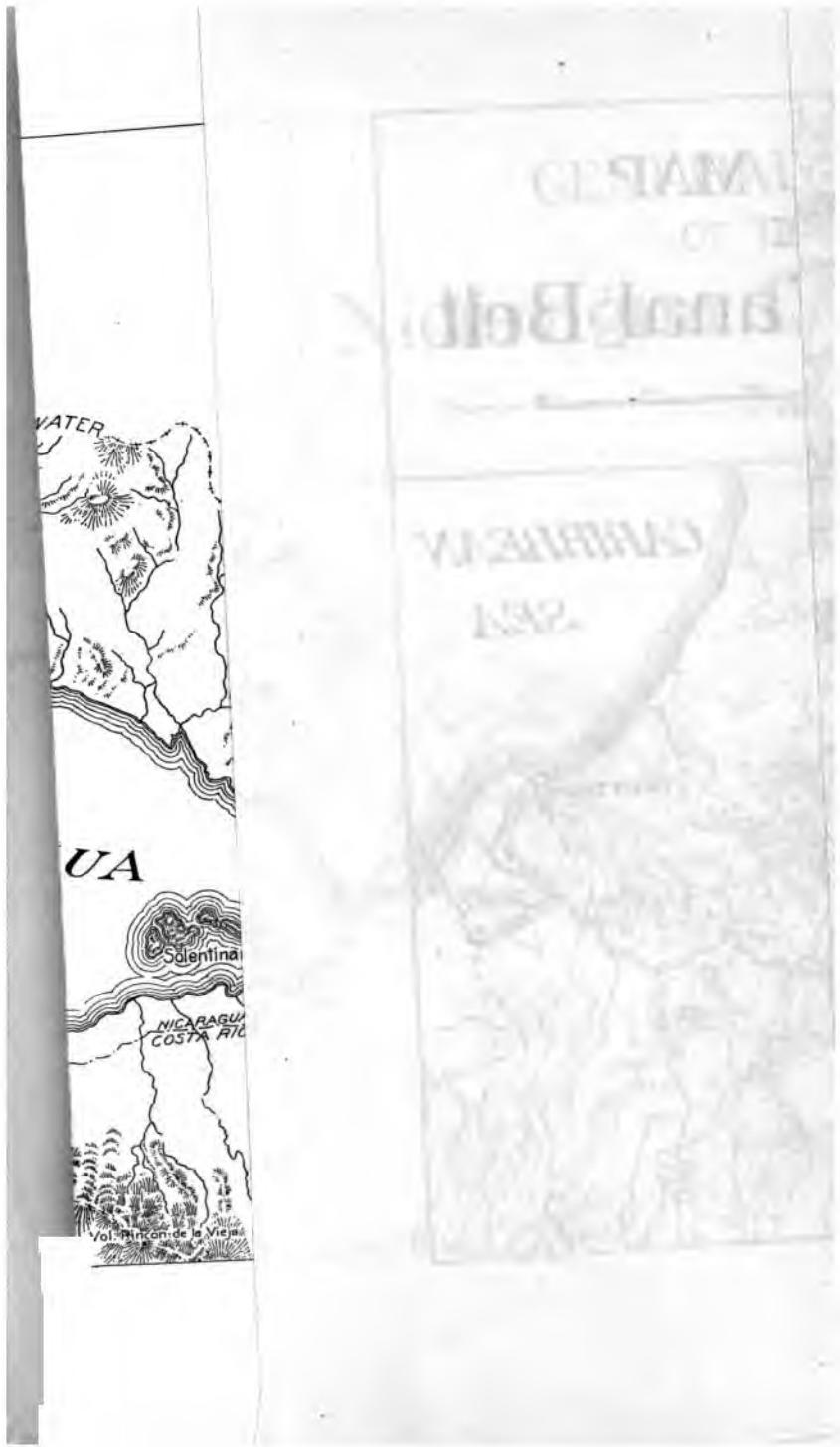


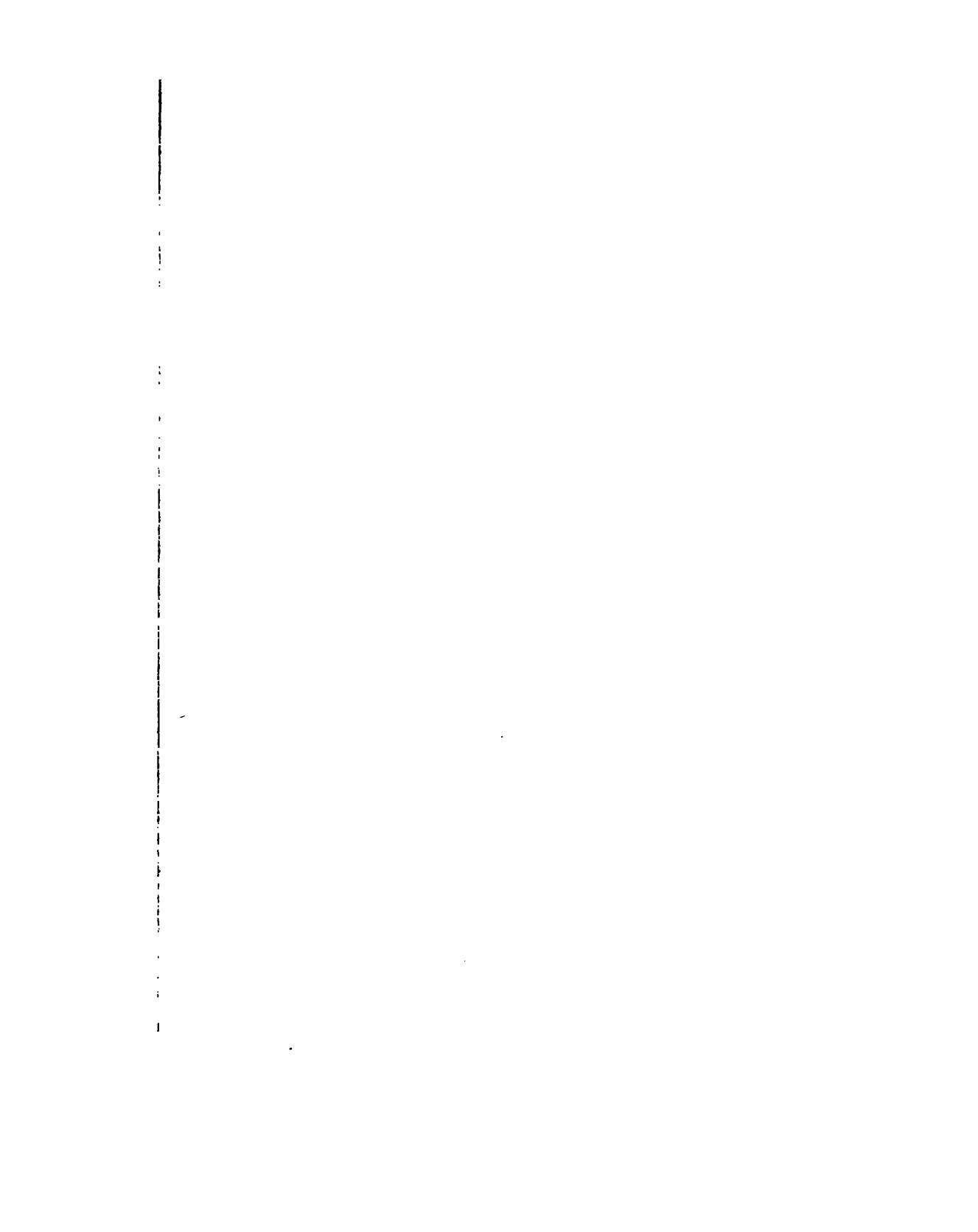
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OCEAN TO OCEAN

CHAPTER I

INTRODUCTORY

A LAND of purple hills and fertile valleys clad in a garment of perennial green, where cold and hunger are alike unknown, and fever flies before the purifying northeast trades, what wonder that an ancient chronicler, marvelling at the lavishness of nature's gifts, called Nicaragua "Mahomet's Paradise"? Everything essential to the material wants of man is ready to his hand, and the earth needs scant encouragement to bring forth its abundance. Luscious fruits of the tropics mingle with products of the temperate zone; oranges, mangoes, guavas, plantains, spring spontaneously from the soil. The feathery heads of cocoanut palms nod against an azure sky, while the blackened stumps in scattered clearings are lost in billowy fields of corn. Deer bound across the forest glades, herds of peccaries thread the matted jungle, and succu-

lent wild turkeys are ever-present neighbors. From the tangled virgin forests of the eastern coast, bathed in warm showers from the restless sea, to the comparatively cultivated Pacific slope, basking each year in six long months of sunshine, the land is one of wondrous beauty and richness. A salubrious climate, an equable temperature, and a marked absence of the more noxious forms of animal life combine to make "Mahomet's Paradise" deserving of its name.

Amidst these fair surroundings four hundred thousand people are dreaming the years away. No traditions of the past, no ambitions for the future, disturb the even tenor of their lives. A hammock in the shade during the sunny summer days, a thatched roof when it rains, plantains plucked from a near-by tree, and corn and beans from some half-cultivated garden supply their every need. In such a climate clothing is merely a concession to the claims of decency, and Nicaraguans are not a nation of prudes. The wonders of the forest, questions of national import, even the frequently recurring revolutions forced by interested party leaders, awaken only a languid and transitory interest in minds habitually steeped in indolence. In a few brief years they shall return to Mother Earth; why, then, vex themselves with disturbing problems which perhaps only time can

solve? Here, one may at least be comfortable: beyond, *quien sabe?*

Situated between $10^{\circ}40'$ and 15° north latitude and $83^{\circ}11'$ and $87^{\circ}40'$ west longitude, Nicaragua has an area of 58,500 square miles, or about seven times that of Massachusetts. Its eastern boundary is the Caribbean Sea, which extends from Cape Gracias á Dios on the north to the Colorado mouth of the Rio San Juan on the south, a distance of about 280 miles. The coast is low and swampy for a distance of from twenty to fifty miles from the sea, and numerous shallow lagoons afford shelter to craft of light draught. A multitude of small islands, the chief of which are Great and Little Corn, Old Providence, and St. Andrew's, lie off shore; picturesque bits of scenery little appreciated by navigators. The only harbors worthy of note which are available for present use are Pearl Cay and Blewfields lagoons, both deficient in depth but otherwise good. Greytown harbor, which fifty years ago afforded safe and ample anchorage for sea-going craft, has been cut off from the sea by bars of sand, and can only be entered by small tugs and lighters through the mouth of the Rio San Juan. It was opened in 1890 by the Nicaragua Canal Construction Company, but since the abandonment of work on the canal it has again closed.

The southern boundary of Nicaragua follows

the right bank of the Rio San Juan from Harbor Head to within three miles of Castillo, where it leaves the river to the northward but runs parallel to it and to the southern shore of the lake, at a distance of three miles, to a point near the Rio Sapoa, whence it takes a southerly direction for a few miles to its terminus at Salinas Bay. The Pacific coast is almost a continuation of the southern boundary, although it trends slightly more to the northward, and the two together form the base of an isosceles triangle, of which Cape Gracias á Dios is the apex, and the Caribbean seacoast and northern boundary the other two sides. The Pacific coast, 200 miles in length, is bold and rocky, with two excellent harbors, Corinto (Realejo) and San Juan del Sur, both of which are visited regularly by ships of the Pacific Mail Steamship Company. Brito, often referred to as a harbor, is merely a slight indentation of the coast-line formed by a projecting rocky headland, and is only used by occasional bands of insurgents or smugglers because of its isolated position. The northern boundary, from the Gulf of Fonseca on the Pacific Ocean to Cape Gracias á Dios on the Caribbean Sea, passes through a comparatively unknown country.

As has been said, the eastern coast is bordered by a low and swampy belt from 20 to 50 miles wide, from the western side of

which spring the foothills of the Cordilleras, heavily timbered and little known except near the Rio San Juan. Thence the country gradually increases in altitude to the summit of the range, rising in the mountainous northern districts to an average elevation of four or five thousand feet above the sea, but barely attaining as many hundred in the depression through which the Rio San Juan flows. The slope from the watershed to the basin occupied by lakes Nicaragua and Managua is short and steep: hence the streams flowing to the westward are insignificant, while those flowing to the Caribbean Sea are long and of considerable volume, traversing broad sloping plateaus dotted with mountain peaks, the origin of which will be explained in a subsequent chapter. The Atlantic slope is covered with a dense virgin forest, producing mahogany and rubber in abundance. Farther to the westward, in Chontales, Matagalpa and Segovia, are broad savannahs sustaining great herds of beef cattle, horses, and mules; while along the Pacific coast is a strip of comparatively open, fertile country, in which is concentrated the greater part of the population and wealth of Nicaragua. Coffee, cacao, sugar-cane, tobacco, rice, and indigo thrive; corn produces two and sometimes four crops a year; and cotton does well but is little cultivated.

The country's natural resources are immense. Millions of acres of rich land, the product of decomposed volcanic tufas, need but little encouragement to yield enormous harvests. Only the innate laziness of the natives, intensified by frequently recurring civil wars and consequent conscription and oppression, prevents the country from blooming like a vast garden. A government bounty of ten cents for every cacao tree and one of five cents for every coffee tree planted is intended to stimulate production, but the difficulty, not to say impossibility, of procuring the payment of such bounties has rendered the device of doubtful utility. Nevertheless, both coffee and cacao are extensively cultivated, the former more particularly in high parts of the country and upon mountain sides, where the air is cool. Fruits grow in surprising variety and profusion. Plantains, bananas, mangoes, guavas, oranges, limes, lemons, nisperos, watermelons, muskmelons, citrons, pineapples, and cocoanuts abound; but little attention is paid to their cultivation, the people seeming to prefer inferior fruit grown without labor to better varieties requiring some care. A favorite fruit, which might more properly be classed as a vegetable, is the *avocado*, or alligator pear, whose yellow, oily meat makes a delicious salad. Medicinal and flavoring plants abound;

sarsaparilla, aloes, ipecacuanha, ginger, vanilla, copaiva, gum arabic, and Peruvian bark (quinine) are indigenous. Mahogany, brazil-wood, cedar, logwood, lignum-vitae, and rosewood grow in the forests, the first three in great profusion, a lack of transportation facilities and the Government's policy of granting exclusive rights to favored merchants alone preventing the development of an extensive and profitable export trade. Gold and silver occur in considerable quantities north and east of the lakes, but the difficulty of conveying suitable machinery over rugged mountains and through trackless woods has prevented any considerable pursuit of what may some day prove a profitable industry.

The feature which renders Nicaragua of peculiar interest to the rest of the world is its great lake, communicating with the Caribbean Sea by a noble stream, the Rio San Juan, and separated from the Pacific Ocean by a strip of land only twelve miles wide, containing the lowest pass through the continental divide from Alaska to Cape Horn. The lake is elliptical in form, 100 miles long by 45 miles wide, and the elevation of its surface varies from 97 to 110 feet above that of the sea. It receives the overflow from Lake Managua, which lies 17 miles to the northwestward and has an area of 438 square miles, the two together draining

about 8,500 square miles of country, a territory as large as the state of Massachusetts. The Rio San Juan, which carries all of this drainage to the Caribbean Sea, is a large stream navigable for river boats during the greater part of the year, but containing four rapids which impede traffic to a certain extent. The "Victoria," an iron boat drawing some five or six feet of water, was taken from the sea to the lake during a period of unusually high water, but under ordinary circumstances no attempt is made to pass the rapids at Castillo, freight being hauled around them on a tramway and reshipped by another boat. The Machuca, Balas, and Toro rapids are passable for river boats during the rainy season. The entire length of the stream, from the outlet of the lake to the sea, is 122 miles, and its average width is about 1,000 feet. Except at the rapids, and in the delta portion during the dry season, there is an abundant depth of water for any but sea-going vessels, although, should the stream be canalized as has been proposed, considerable straightening and deepening would be necessary. The upper reaches are characterized by a comparatively sluggish current, but below the mouth of the Rio San Carlos it is a swift, shallow, turbid stream.

The depression west of the lake, through which it is proposed to build the canal, con-

sists of the Rio Las Lajas and Rio Grande valleys, the former containing a lake affluent and the latter sloping gently to the Pacific Ocean. The summit of the separating divide is only 154 feet above the sea, and the distance from lake to ocean along the projected location is about 17 miles.

Besides the Rio San Juan, Nicaragua has three large rivers, all of which flow into the Caribbean Sea and are comparatively unknown. They are the Rio Coco, called also the Wanks and the Segovia, which follows the Honduras boundary and enters the sea at Cape Gracias á Dios; the Rio Grande,¹ or Avalsara; and the Escondido, or Blewfields River, which debouches into Blewfields Lagoon. Many streams of lesser size flow to the sea or feed the lakes; west of the Chontales mountains they are, however, usually somewhat torrential in character, attaining considerable volume during the wet season but dwindling to extinction beneath the scorching sun of summer.

The great chain of the Cordilleras, which formerly constituted the continental divide, crosses Nicaragua from northwest to southeast, paralleling the eastern shore of the lake at a dis-

¹ This should not be confounded with the Rio Grande west of Lake Nicaragua, through whose valley the canal location passes. There are at least three Rio Grandes in Nicaragua—probably many more.

tance of some thirty miles and thrusting itself upon the San Juan valley near the town of Castillo. West of this range, and extending from the Gulf of Fonseca on the north to the island of Ometepe on the south, is another, the Cordillera de los Marabios, consisting of a series of volcanic peaks in various stages of activity or decay. Through these vents has been ejected, in comparatively recent geologic times, the material which forms the Jinotepe plateau and the fertile plain of Leon, and which, by separating the former Bay of Nicaragua from the Pacific Ocean, has produced the present lake. Many of the peaks are extinct and crumbling; others, as Momotombo, smoke and give occasional signs of activity. While numerous eruptions have taken place within historic times, none of consequence have been in dangerous proximity to the canal line, and there are reasons, which will be explained later, for supposing that future outbreaks will occur in the more remote portions of the range.

Nicaragua is a military despotism masquerading as a Republic. The president, although nominally elected by the people, is almost invariably a successful military leader who forces himself into office and maintains his supremacy with a strong hand. Such a government, while arbitrary and tyrannical, is probably best adapted to the needs of the country. In their

present stage of development the people are unfit for true self-government, and internecine war and consequent national disintegration would result from any indecision or over-scrupulousness on the part of the executive. The present incumbent, General Zelaya, is an able, broad-minded man whose strong personality and indomitable energy have enabled him to administer a restless and unappreciative country for eight troubled years. He represents the Liberal party, and, since one of its most notable achievements has been the curbing of the power of the clergy in temporal affairs, it is needless to say that the sympathies of the priesthood are in general with his Conservative opponents, the chief of whom live in exile, whence they direct abortive insurrections against the existing government. Notwithstanding a certain laxity of morals among her local officers the Church has great influence with the people and is an ally not to be despised.

Zelaya first became President in July, 1893, as the result of a revolution against an unpopular Conservative government. He was elected for a third term of four years in 1901,—his enemies say after disfranchising a large number of his political opponents by the simple expedient of conscription. Under his rule the country has prospered, according to Central American standards, and it is probable that the occasional

insurrections which occur are due more to the desire of Conservative leaders to return to power than to any wide-spread dissatisfaction among the people. The government is despotic, but perhaps none other would be less so. The Constitution is modelled somewhat after that of the United States, but with certain important differences. Perhaps the most far-reaching of these is the power of appointment vested in the President. He designates all departmental and municipal officials and is thus enabled to employ agents who may be depended upon to carry out his will. His power of disfranchising voters of opposing factions by impressing them for military service has already been noted. A Cabinet of five ministers is selected by the President, and there is a Congress of one house, the members of which are elected by universal suffrage for terms of two years. The judicial power is vested in a supreme Court of Justice, two chambers of second instance, and judges of inferior tribunals. The army is the entire male population of the country, a portion of which is always under arms; a bare-footed, undisciplined mob, armed for the most part with old Remington rifles, it is nevertheless a rather effective fighting force of great endurance and mobility. A limited number of modern field-guns are efficiently served by trained men. There is no real navy,

although the "Momotombo," an old tramp steamer mounting several field-pieces, lay at Corinto when I was there, and "El '93," plying upon Lake Nicaragua, is owned by the government and frequently has troops aboard.

The population of Nicaragua is estimated at 420,000, most of which is concentrated north and west of the lakes. The Indian element predominates, but there are many whites and negroes of pure blood, besides a large mixed population. The whites are of course chiefly of Spanish extraction; the Indians of Matagalpa and the west coast are of Aztec descent, retaining the mild and amiable characteristics of their forefathers, while those of the east coast are of a different race, darker and smaller, and are usually called Caribs or Mosquitoes, although these names should properly be applied only to members of two among many related coast tribes. The principal towns, in order of their size, are Leon, Masaya, Granada, Chinandega, Managua, and Rivas; no reliable census has ever been taken, but their population is estimated as follows: Leon, 50,000; Masaya, 18,000; Granada, 15,000; Chinandega, 12,000; Managua, 10,000; and Rivas, 8,000. They are all upon Nicaragua's main artery of commerce, which extends from Greytown to Corinto and consists of the Rio San Juan, Lake Nicaragua, a railway from Granada

on Lake Nicaragua to Managua on Lake Managua, Lake Managua, and a railway from Momotombo on Lake Managua to Corinto. Rivas has the additional commercial advantage of being within eighteen miles of the port of San Juan del Sur, but this is neutralized by its lack of sympathy with the existing government and its proximity to the Costa Rican frontier, which make it the objective point of occasional revolutionary incursions from the neighbor state, to the utter destruction of trade. The country is of course essentially agricultural, and manufacturing and mining are infant industries. Nevertheless, large quantities of brown sugar and aguardiente are produced for home consumption, while cotton, silk, shoes, hammocks, saddle-bags, pottery, hats, saddles, and other articles of native make bid fair to hold their own against imported goods.

An impression seems to prevail throughout the United States that Nicaragua is an unhealthful country. Nothing could be farther from the truth. The climate is doubtless enervating, because of the continuous heat and the quantity of moisture in the air during half the year or more, but it is not more unhealthful than that of large portions of our own country. Remittent and intermittent fevers, which are the most prevalent diseases, are mild in character, of brief duration, and succumb

readily to medical treatment. The same may be said of most other maladies, particularly of bronchitis and pneumonia. Yellow fever, which rages at Port Limon, 75 miles down the coast, is unknown at Greytown, perhaps because the heavy and almost constant rainfall prevents the accumulation of filth. Certain towns on the west side have an unenviable reputation for sickliness, but this must be attributed, not to the climate, but to an utter disregard of the simplest sanitary precautions. To an individual or community living under suitable conditions the climate is innocuous, although it may be questioned whether it will remain so along the canal line after excavation has begun.

CHAPTER II

NARRATIVE — NEW YORK TO GREYTOWN

IT was arranged that we should sail from New York for Greytown the 5th of December, 1897, on the gunboat "Newport," which had been placed at the disposal of the Nicaragua Canal Commission by the Secretary of the Navy both for purposes of transportation and to make the necessary off-shore surveys at Greytown. The day fixed for our departure dawned clear and cold, with a stiff westerly wind.

In accordance with a previous arrangement, I met the members of the Commission and the Chief Engineer at the foot of East 23rd Street and embarked with them upon a tug which took us over to the Navy Yard, where the "Newport" was lying. The little ship was crowded from stem to stern, and it was with some difficulty that we struggled to our quarters and stored our impedimenta, but when the whistle sounded there was a shoreward rush of relatives and friends and our party assumed its normal proportions. We

left the dock amid shouting and waving of handkerchiefs and were soon steaming down the harbor.

The "Newport" is a little composite barkentine-rigged gunboat of a thousand tons' displacement, of considerable coal endurance, but only moderate speed, and as we carried a lot of lumber and two large steam launches on the spar deck she trimmed badly and could not do herself justice. Then, too, she had recently been put in commission and possessed no heating facilities. The result was that when we got outside Sandy Hook and were exposed to the full force of the biting winter wind and an unaccustomed swell, sixty-nine depressed landsmen of the engineering staff crowded forward to the funnel's grateful warmth, heedless of the fact that the odors arising from the engine-room hatch were not the best possible preparation for a trip around Cape Hatteras. Dinner and supper were poorly attended,—which perhaps was fortunate, since the cooks had not yet found their sea legs,—and we turned in early, sleeping in cots and hammocks so closely packed together on the gun deck that, once ensconced in one's proper berth, it was practically impossible to move. I was thought particularly fortunate in being quartered in the Captain's office, but as I lay crosswise of the ship I stood first on one

end and then on the other, like a living minute glass; and towards morning, when I had finally attained a state of blissful unconsciousness, the typewriter slid from its stand, and, falling upon my already sorely tried stomach, abruptly recalled me to the stern realities of life. All the next day and night it continued cold, but the wind was in the main fair and we made satisfactory progress. By Tuesday we began to run into warm weather and during the remainder of the trip our only difficulty was in keeping comfortably cool.

Our daily routine never varied. At five, or a little before, we turned out, that our bedding might be stowed away and the decks scrubbed. We went forward and pretended to wash in salt water under very unfavorable conditions, and then perched upon high places to watch the stars fade and the sun rise out of the sea, while the blue-jackets, with trousers rolled up to their knees, sluiced water about the decks. At half past seven we breakfasted, provided two hours and a half on a heaving deck had not made it a physical impossibility, after which pipes and cigars were produced and endless yarns were spun. I do not think we enjoyed our tobacco much, but he who smoked not was regarded with suspicion. Dinner was the next event, followed by more smoke and yarns.—and so the day wore away. We

turned in early, both to kill time and to get a little sleep before the pitiless boatswain's mate awoke us in the gray of the morning to another round of meals and ancient tales.

Off the Florida coast the trip was delightful. The sea was smooth, with a gentle breeze from the westward, and we skirted the shore, sometimes within a mile and a half of the beach. Schools of flying fish skimmed over the waves, and occasionally the long fin of a shark broke the monotony of the water. At night a glorious moon cast a silver sheen along our wake, the lapping of waves at our sides, the murmur of wind in the rigging, and the occasional chiming of the ship's bell alone breaking the silence as we swept onward like a great white ghost towards the sunny south.

We reached Key West on the morning of Saturday, the 11th of December, and at once began coaling ship, that we might reach Greytown with full bunkers. From our berth at the end of a long pier extending into the clear emerald green water, we had an excellent view across the harbor, dotted with shipping and enlivened by boats pulling to and fro.

On the shore near by were the custom house and an arsenal shaded by southern laurels and standing against a fine background of feathery palms. Behind these lay the town, which was quite foreign in appearance and where we

heard as much Spanish as English. The soil is sandy and the growth of grass was consequently rather sparse, but many of the dwelling houses, although without any pretence to architectural beauty, were rendered very attractive by the mass of semi-tropical foliage which surrounded them. The dark glossy leaves of the laurel, the nodding heads of the palms against the brilliant azure sky, and the distant sparkle of the ever-present sea made a picture not easily forgotten. There were many little shops with Spanish signs where tobacco, coral, sponges, and shell ornaments were sold, but everything except cigar-making was apparently upon a small scale.

On and near the shelving beach lay scores of small craft used for sponge fishing and in the other industries which support the place, and several sea-going vessels, including two men-of-war were anchored in the harbor. At one time the low-lying keys to the eastward were a veritable gold mine to the wrecker, but there are now so many light-houses and beacons that navigation is rendered comparatively safe.

We left Key West early Sunday evening and threaded our way cautiously out to sea. It was a beautiful still night, and by the time we had fairly left the lights of the town behind us and shaped our course for the Dry Tortugas, the moon rose like a ball of fire from the

sea, and, paling as it neared the zenith, shed a path of silver over the crystal trembling waves. All day Monday the calm lasted, and the sea was smooth as glass, but by Tuesday morning we were out from under the lee of Cuba and awoke to find the ship plunging and thrashing along through the water, with a stiff breeze on her port quarter and the spray flying from the crest of every wave. All our sails were drawing and we lay over in a smother of foam, our mastheads describing strange curves against the mass of tumbled clouds above us, and our smoke flying to leeward in eddying, attenuated streaks. The sun shone brightly most of the time, but occasionally one of the sudden and violent showers so characteristic of that region drove us all below and turned the gun deck into a heaving, staggering pandemonium.

On Friday morning, December 17th, I went on deck just as the first rays of the sun were gilding our mastheads, and far away on our starboard bow was a shadowy blue mass which gradually resolved itself into the hills of Nicaragua. The outline was bold and irregular, but when we had run in within a few miles of the coast we could see that the hills were back from the shore, and that the country near the sea was low and flat. As we approached Greytown we saw the *Atlas* boat discharging freight into a lighter, and a small iron fruit-boat from

Blewfields pitching uneasily at anchor. The big liner looked very cool and comfortable with her long sweep of shaded deck heaving gently to the swell of the sea, the glittering brass, flapping awnings, and white-coated stewards suggestive of all the luxuries which we had left behind. We sent a whale-boat across to her when we had anchored, and arranged to get some of our men ashore on the tug which handles the lighters, for the bar is a notoriously bad place, and its passage should only be attempted in small craft under native pilotage. It was here that Commander Crossman and several men of the '72 expedition were drowned by the overturning of their whale-boat in the surf, others of their party barely escaping with their lives.

From our anchorage we could not see Greytown, which was on a lagoon behind a low, wooded sand-spit, and our view consisted of a few miles of Nicaraguan shore, flat and densely wooded, with a beach upon which a row of foaming breakers was continually visible. Far back inland were a few blue hills of some altitude, but the country upon the whole seemed flat and uninteresting. It was extremely hot and a heavy swell from the southeast kept us plunging and rolling uneasily. A few sharks swam lazily about the ship, and they and an occasional gull were the only objects which



CAMP ON SAN JUAN RIVER.

varied the monotony of the scene. Our party lounged about in the shade, watching the crew unship the davits on the port side, preparatory to launching one of the two steam cutters which we had on deck, and wishing for speedy deliverance from our narrow and unstable quarters.

Saturday morning the Greytown tug and lighter came alongside the "Newport," and the transfer of freight and personal effects began. A heavy sea was running and the wind set us across it so that we rolled badly, but suitable tackle was rove and piece after piece was safely swung into the lighter.

While this work was in progress the government tug "San Jacinto" arrived to take the Commissioners ashore, and they and the Chief Engineer were swung down one at a time in a boatswain's chair before an interested and critical audience. When the lighter was loaded most of our party scrambled aboard the tug which had her in tow and we started for shore. The breakers looked so formidable, and we had heard so much said about them, that we anticipated rather an exciting time, but we passed them with very little trouble, those which broke over the boat scarcely wetting the floor of the little cabin in which we were. After crossing the bar we turned sharp to the right and ran to a large stern-wheel boat of the Mississippi River type, to which we trans-

ferred ourselves and our possessions. While this change was being effected we noticed signs of life about a little thatched hut on shore, and presently there emerged from it the first Nicaraguan troops which we had seen. An officer with a machete and three bare-footed soldiers with muskets, who seemed to constitute the garrison, solemnly drew themselves up and presented arms. We gave them a hearty cheer, upon which they dropped their inoffensive looking weapons in every direction and waved their hats, yelling and grinning in a friendly but unmilitary way. The river boat carried us up the lower San Juan, through dense masses of tropical vegetation and past sandbanks where alligators lay sleeping in the sun, and then, turning into a narrow, crooked channel, emerged into Greytown Lagoon. We stopped a moment at the town and then steamed westward for about a mile and a half to La Fé, a group of buildings belonging to the Canal Company and situated near the end of the canal cutting. Landing at a rotten wharf, we made our way to the big wooden building which had been assigned us for quarters, and established ourselves as comfortably as circumstances would permit. The ground floor of the structure was formerly used as a storeroom and above it were two stories of bedrooms opening upon verandas. Years

of neglect and a hot, moist climate had badly rotted portions of it, but a little repairing rendered it safe, and we found it most useful while we were organizing parties and fitting them for the field. Our chief discomfort arose from the multitude of fleas, whose appetites, whetted by an enforced fast of several years, were abnormal and insatiable.

Along the shoreward side of the building a rusty railway track, sustaining a dilapidated push-car, vanished to the northwestward, where a series of widely separated cottages and offices extending from La Fé terminated in the deserted and decaying hospital settlement; and across the track, within a stone's throw of our quarters, was a long, low, one-storied wooden building, which a motley array of cooks and attendants soon converted into a serviceable kitchen and dining room. From our verandah we could look out over Greytown Lagoon, across a multitude of low sand-spits covered with a growth of scrub, to the open sea where the "Newport" pitched uneasily at anchor; and far to the right the roofs of Greytown gleamed white against a background of green. Three giant dredgers lay rotting in the lagoon, and the half submerged hulks of several lighters, rusty boilers and machinery piled upon the bank, and decaying buildings, gave an indescribable air of

desolation to the scene, despite the forest growth which thrust itself upon us from behind, hiding the boundless swamp which stretches inland from the sandy shore.

An old steam launch chartered by the Commission made regular trips between La Fé and Greytown, enabling us to get backwards and forwards quickly and to transact business with Commissioners, Chief Engineer, or Chief of Commissary, all of whom were quartered in the town. It rained nearly all the time, sometimes with great violence, and the fact that we were supposed to be entering upon the dry season made us appreciate the saying that there are but two seasons on the east coast of Nicaragua, the "wet" and the "wetter." The yearly rainfall varies from two to three hundred inches and a precipitation of over eight inches in nine hours has been observed.

The population of Greytown consists of foreign merchants, native Nicaraguans, Jamaica negroes drawn thither by the canal, and Mosquito Indians, a semi-amphibious race of aborigines. These latter are wonderfully skilful boatmen and venture far out to sea in their frail craft under conditions which no ordinary boat could survive. They are natives of the former Mosquito Reservation, now the Department of Zelaya, a tract of country about forty-five miles wide extending along the

shore of the Caribbean Sea from the Rama River on the south to the Wawa River on the north, a distance of about one hundred and sixty-five miles.

San Juan del Norte, as the Nicaraguans call Greytown, is built upon the delta plain of the Rio San Juan, which is composed of volcanic detritus brought chiefly from the mountainous regions of Costa Rica by the San Carlos and Serapiqui tributaries. The prevailing northeast trades induce a littoral current which flows slowly along the coast to the southeastward, but its action near shore is more than neutralized by a northwestward drift due to wave action, which transports a portion of the material carried by the river and deposits it in the form of curved sand-spits approximately parallel to the mainland. Thus the delta grows but trends to the northward, the spits in course of time joining the main delta plain and enclosing lagoons which gradually clog up with silt and decayed vegetation and become swamps. Greytown harbor was originally formed by one of these sandy accretions, but the same agencies which produced it have since operated to destroy it. In 1832 it was a safe and ample harbor with an unobstructed entrance nearly two miles wide and thirty feet of water for anchorage. At the present time it is a shallow lagoon into which sea-going vessels cannot enter.

The town itself presents no features of peculiar interest; indeed, its similarity to towns in the southern part of the United States and the prevalence of the English tongue rob it of the sleepy charm which attaches to most Central American hamlets and almost make the traveller forget that he has left his native land. There is a plaza, or public square, without which no Nicaraguan town could be complete, and about it and along the broad main street are the principal buildings of the place. These are of wood, one or two stories high, neatly painted and frequently surrounded by tropical foliage. Cocoanut palms nod in the plaza and around the houses, while breadfruit and orange trees thrive wherever utilitarian or artistic considerations have overcome native inertia. Shops are numerous and better stocked than one would expect, while prices, owing to the fact that Greytown is a free port, are very low. A horse-railroad, over which a solitary car makes infrequent trips, traverses the principal thoroughfare, affording transportation facilities which, while poor, seem in excess of the demand. That the property is not remunerative may be inferred from the fact that one of our men, his sense of humor stimulated by deep potations, chartered the conveyance for a day for five dollars and, locking himself inside, spent the entire time riding to and fro, successfully



RUINED DREDGERS AT GREYTOWN.

maintaining his position against the aggrieved public until the expiration of his lease.

While Greytown owes its international importance to its prospective value as the eastern terminus of an interoceanic canal, its position at the mouth of the Rio San Juan insures the passage through it of a considerable foreign commerce. A line of river steamers brings down rubber, coffee, dyewoods, and other products of the country, which are shipped abroad, chiefly by the Atlas Line steamships, and takes back various imported goods for consumption in the interior. Thus the town prospers, according to Central American standards, even while canal construction is at a standstill, but its citizens look forward with confidence to a resumption of work and a wave of prosperity which shall sweep them on to affluence. When we were there it was a town with a recent commercial past, a past in which the canal had seemed a certainty, and in which the three great dredgers now rotting in the lagoon were hard at work, bringing prosperity to every one. The bit of canal three or four thousand feet long, the teredo-riddled jetty, the giant dredgers falling to pieces in the harbor, and the deserted buildings slowly rotting away, are perishing monuments of a brave attempt to pierce the American isthmus.

CHAPTER III

HISTORICAL AND DIPLOMATIC

THE history of the Mosquito Coast is largely a history of British pretensions to territory and sovereignty and of consequent diplomatic controversies. If the prior claim of the aborigines be disregarded, Central America, discovered by Còlumbus in 1502, explored and colonized by Gil Gonzales Davila and Francisco Hernandez de Cordova, was properly a Spanish possession up to the revolution of 1821. But the natural preference of Spanish settlers for the sunny western slopes left portions of the eastern coast almost uninhabited save by Indians, and invited encroachments which were subsequently made the grounds for British claims to territorial rights and sovereignty. Early in the seventeenth century the Caribbean Sea swarmed with English, French, and Dutch buccaneers, who, encouraged while disowned by their governments, hovered among the coral reefs of Central America and the West India islands and harassed the commerce of Spain. English freebooters skirted along the Mosquito Shore, cultivated

the friendship of the fish-eating Moscoe Indians, and finally established headquarters at the mouth of the Wanks or Segovia river and in Blewfields and Pearl lagoons, making allies of the aborigines and forming illicit connections with their women. Thus occurred contemporaneously the first English occupation of Nicaraguan soil and the initial step in the evolution of the hybrid Mosquito Indian. Events which followed strengthened the bonds of union between the races. The Earl of Warwick, authorized by Charles I., seized the island of Old Providence, planted a colony upon it, and established a trading post at Cape Gracias á Dios. Settlers and Indians were soon on cordial terms, and the native king was eventually persuaded to send his son, the heir apparent, to England to be educated. Besides encroaching upon the Nicaraguan coast, the buccaneers landed at Belize and upon the Bay Islands, laying the foundation of future British claims, based, it is true, upon the unauthorized depredations of adventurers, but maintained none the less with unscrupulous diplomacy and a strong hand. Protests of the Spanish Ambassador at the Court of St. James proving ineffective, an expedition was fitted out in San Domingo in 1650 which drove the English from the Bay Islands. The latter retaliated by incursions up the San Juan River, during one of which, in 1655, they

actually succeeded in capturing and plundering the city of Granada. In the same year England secured a foothold on the island of Jamaica and in 1670 she negotiated with Spain the treaty of Madrid, which provided "that the most serene King of Great Britain, his heirs and successors shall have, hold, keep, and enjoy forever, with plenary right of sovereignty, dominion, possession, and property, all those lands, regions, islands, colonies, and places whatsoever, being or situated in the West Indies, or any part of America, which the said King of Great Britain, or his subjects, do at present hold and possess." Up to this time the English Government had disclaimed responsibility for the depredations of the buccaneers, on the ground that they were outlaws, but it now became expedient to recognize them as British subjects, and they were accordingly induced to discard their piratical vocation and to become peaceful cutters of mahogany and dye-woods. Intent upon retaining their territorial acquisitions and attendant advantages, they maintained amicable relations with the Moscoes, whose Indian blood had been further diluted by amalgamation with a shipload of negro slaves wrecked upon the coast in 1650, and even induced Oldman, the prince of English education who had succeeded to the throne upon the death of his father, to acknowledge

the sovereignty of Charles II. In return for his complaisance a commission purporting to come from his royal cousin was bestowed upon him and he was ceremoniously crowned with an old cocked hat. The real power over the Mosquito Coast was thus in English hands, but the arrangement had not been officially sanctioned and the attitude of the British Government in case of forcible Spanish intervention was deemed somewhat problematical. To eliminate this uncertainty Jeremy, who succeeded Oldman on the Mosquito throne, was despatched to Jamaica in 1687 to petition the Governor that he, like his father, be taken under the protection of His Majesty's Government. His mission was unsuccessful, but a second attempt in 1720 resulted in the negotiation of a treaty whereby a virtual protectorate was established over the Mosquito Coast.

England chose to regard the Madrid treaty merely as a recognition of rights already acquired by her, and as in no wise constraining her to conform to already established territorial limits. Her woodcutters continued to extend their possessions, confident of the ultimate recognition and protection of the Home authorities, while Spain, in fancied security, watched successive encroachments without resentment. Upon the approach of war between the two countries, in 1739, the English Government

devised a plan of operations against the colonies of Spain, involving the seizure of the Mosquito Shore and the invasion of the San Juan valley. Naval operations were begun on the eastern and western coasts, and agents were sent to Belize and the Mosquito Shore to organize the English settlers and secure the co-operation of the Indians. Robert Hodgson, agent to Mosquitoland, formally proclaimed an English protectorate, raised the British flag, and procured the ratification of the compact by both parties. Forts were erected, troops were sent over from Jamaica, a colony was established at the mouth of the Black River, the island of Ruatan was seized, and finally, in 1748, the occupation of the Rio San Juan valley was attempted and would have been accomplished but for the ratification of a treaty of peace between the contending Powers. Mutual restitution of conquests was agreed to, but this seems to have had little influence upon England's subsequent policy. Hodgson remained in Mosquitoland as Superintendent of the Shore, protests from the Spanish Government being met by a statement that his presence among the Indians was necessary to prevent a general massacre of Spaniards. An unsuccessful attack by the latter upon the colonists at Belize, in 1754, was seized upon by the English as a pretext for still further extend-

ing their settlements, and in 1756, at the beginning of the Seven Years' War, they were practically in possession of the entire eastern shore of Central America.

The Treaty of Paris, which put an end to this conflict in 1763, did not pretend to define the sovereign rights of either country on the Mosquito Shore, but it was agreed that England should demolish such fortifications as she had erected in disputed territory and that in return for this concession, her subjects should be allowed to cut wood unmolested anywhere along the shore. This would seem to be a virtual admission by Great Britain that her rights were of a purely usufructuary nature, but technicalities have rarely been allowed to check the growth of powerful nations, nor have considerations of equity always outweighed those of expediency in the determination of their foreign policies. Nevertheless, her actions at this time were of a conciliatory nature. An unauthorized and unsuccessful raid by Hodgson upon the San Juan in 1769 resulted in his recall, and fortifications were destroyed and garrisons removed as had been agreed. The Colonial Office did not recede from its pre-determined policy, however, and in 1775 Mosquitoland was attached to Jamaica as a dependency. The settlers at Belize had meanwhile established and successfully maintained

a government of their own, officially recognized by Admiral Burnaby, and the Governor of Jamaica was now directed to watch over the two infant colonies, which Spain was apparently willing to relinquish rather than resort to force. But the Spanish colonists were less indifferent and had already attacked the English when the outbreak of war, in 1779, aroused Spain to renewed activity. An expedition against Belize was repulsed by the English, who followed up their advantage by again attempting to occupy the San Juan valley and to take Granada and Leon, thus cutting in two the Spanish possessions and gaining permanent control of what was even then recognized as a practicable route for an inter-oceanic canal. The enterprise ended in utter failure, for, although Castillo Viejo was successfully besieged, disease nearly exterminated the British forces and necessitated the abandonment of the campaign. Of eighteen hundred men forming the invading army only three hundred survived. This serious misfortune to the British arms encouraged the Governor of Guatemala, who organized an expedition, fell upon the English colonists and drove them before him. The opportune arrival of reinforcements from Jamaica reversed the situation, however, and the Spanish commander was forced to capitulate on August 28th, 1782.

The treaty of Versailles was supposed to settle definitely and forever the rights of English settlers in Central America. In it Great Britain explicitly admitted Spain's claim to sovereignty over the entire Isthmus and undertook to confine her own subjects to the settlement of Belize, where her right of log-cutting was to remain unimpaired. But she took no steps to procure the withdrawal of settlers from the Mosquito Coast and Bay Islands, nor were the Spanish colonial authorities able to do so. In 1786 a supplementary treaty was made, in which England again bound herself to limit her colonists to the settlement of Belize, provided its boundaries were considerably enlarged, — a hard condition to which Spain was obliged to consent. The ratification of this treaty was followed by a general withdrawal of British subjects from Mosquitoland and the establishment by the Spanish Government, in 1791, of a port of entry at Greytown; but the Mosquito Indians, instigated by English traders, refused to recognize the sovereignty of Spain and successfully resisted all attempts to subdue them.

A renewal of hostilities between England and Spain in 1796 encouraged the settlers at Belize, impatient of their territorial limitations, to encroach upon the surrounding country, while the English Government showed that it no longer considered the treaty of 1786 bind-

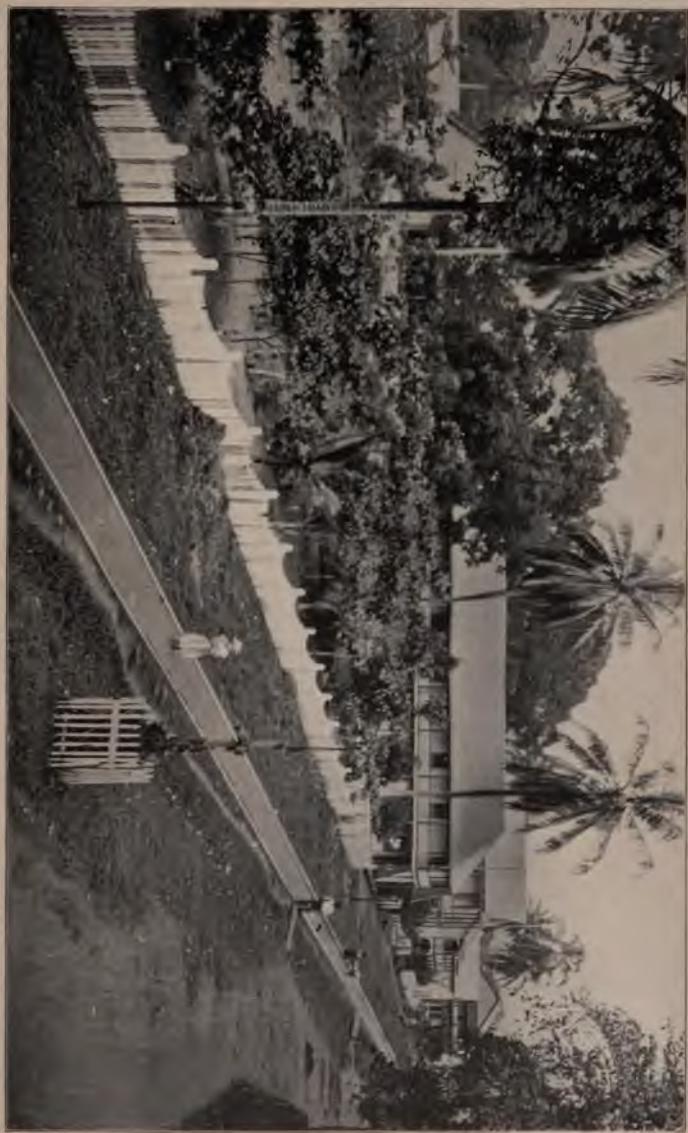
ing by landing several thousand Carib Indians from St. Vincent upon the Bay Islands. The war ended without any other marked change in conditions on the coast, but a subsequent ill-advised attack upon Belize by Guatemalan troops afforded the colonists a pretext for disregarding a treaty which the Spanish authorities had themselves broken and for advancing across the boundary to the westward and southward. By the treaty of Madrid, concluded in 1814, the conventions of 1783 and 1786 were reaffirmed, but while Central American affairs were thus theoretically restored to their former *status*, as a matter of fact England was in actual possession of a greatly increased territory, and the previously uninhabited Bay Islands were occupied by Carib Indians. Moreover, British influence was systematically and persistently directed toward the acquisition of the Mosquito Coast. In 1816 George Frederick, Crown Prince of the Moscoie tribe, was taken to Belize and subsequently to Jamaica and England to complete his education. Upon the death of his father he was ceremoniously crowned at Belize "King of the Mosquito Shore and Nation" and returned to his native land aboard a British man-of-war, only to perish shortly afterwards in a drunken brawl. His half-brother Robert then ascended the throne, but his sympathies were thought to be with

the Spaniards and he was accordingly deposed by the colonists, who replaced him with a pure-blooded negro, George Frederick II. After a brief and uneventful reign, this worthy was succeeded by another Sambo king, Robert Charles Frederick, a spendthrift monarch whose willingness to barter large tracts of his domain for alcoholic stimulants and gaudy raiment resulted in his deportation to Belize, where he died after naming Colonel MacDonald, Superintendent of Belize, regent of Mosquitoland during the minority of his children. MacDonald deputed Patrick Walker to act in his stead, and the latter soon reorganized the government at Blewfields, retaining the emblems of native royalty, but placing the real power in English hands.

In the meantime, Sir John MacGregor had obtained from King George Frederick a grant of land south of the San Juan over which Mosquitoland claimed jurisdiction through alliances with the Poya natives. This grant was sold to an English company, which promptly established a colony upon it. The next step was to connect the Mosquito Coast settlements with Belize, which was done by seizing and settling the island of Ruatan while Honduras, which had thrown off the Spanish yoke in 1824 and was now a state of the Central American Republic, was occupied with civil strife and

unable to offer any opposition. In March, 1835, the English residents of Belize established a colonial government of their own, changed the name of their possessions to British Honduras, announced to Guatemala their assumption of independence, and in 1840 proclaimed the supremacy of English law in British Honduras, Ruatan, and Mosquitia. Pending an investigation of the situation, no formal action was taken by the Home Government, but commanders of war-ships on the West India Station were directed to sustain the action of the colonists should need arise. With the aid of a naval contingent, Macdonald formally occupied Ruatan in 1841, and, continuing along the coast in an English frigate, accompanied by a sloop-of-war flying the Mosquito flag, stopped at San Juan del Norte and demanded of Colonel Quijano, Commandant of the port, the recognition of the Mosquito King. Quijano very properly refused, whereupon he was seized, transported to an unsettled portion of the coast, and left to shift for himself.

These various indignities were naturally resented by the Central American States, but their remonstrances were ignored by Great Britain, while an appeal to the United States during the Jackson administration was dismissed by the President with the statement



THE PLAZA, GREYTOWN

that interference was deemed inexpedient. The fact of the matter seems to have been that the Government was ill-informed as to the actual state of things and fearful of blundering.

The annexation of Texas to the United States in 1845 stimulated England in her efforts to dominate the Isthmus. Macdonald, having outlived his usefulness, was recalled, a regular Governor and other colonial officials were sent to Belize, and Guatemala was officially informed by the Secretary of State for the Colonies that the settlement of Belize had become the colony of British Honduras, and extended as far south as the Rio Sarstoon. Honduras was told, in the same way, that the Crown recognized Macdonald's seizure of Ruatan, and that the island was henceforth to be entirely under British control. In 1847, Lord Palmerston informed the Central American States that the Mosquito Kingdom must be recognized as an independent power under the protection of Great Britain, and that its territory extended "from Cape Honduras down to the mouth of the San Juan"; but Chatfield, in transmitting the message, added that these boundaries were announced "without prejudice to any rights of the Mosquito King south of the San Juan," thus providing an excuse for southerly extension, should it ever be deemed expedient. Of course, this bold assumption of practical sov-

ereignty by England evoked a storm of protest from Central America, particularly from Nicaragua, who was the greatest sufferer, but Great Britain's reply to the demurring State was ready. The war-ship "Alarm" appeared off the port of San Juan, with his Mosquito Majesty aboard, and the Commandante was notified to replace the Nicaraguan flag with the Mosquito ensign and to salute the King. This he refused to do, so the English landed a small force, and performed the ceremony themselves.

At a council of the Mosquito nation, held on the 8th of December, 1847, resolutions were adopted calling upon Nicaragua to immediately evacuate the port of San Juan. This demand was carried to the Nicaraguan authorities in the interior by Chatfield, whose absolute refusal to consider any suggestions of arbitration was evidently due to a desire to encourage a resort to arms. Nicaragua placed a small force in the field, intending to defend the port, but before her troops reached their destination, three English war-ships were anchored off the town, which lay completely at their mercy. The native soldiery was obliged to retreat up the river to Sarapiqui, and to remain inactive, while, on the 1st of January, 1848, English marines landed, raised and saluted the Mosquito flag, and installed an Anglo-Mosquito government. The name of the port was changed to Greytown, in honor

of Governor Sir Charles Grey of Jamaica, to whose endeavors its seizure by the English, in behalf of their hypothetical allies, was largely due. But the British claims were still in need of strengthening, and, as a means towards this end, an armed attack by Nicaraguan troops was cleverly provoked. All that was necessary was the removal of the war-ships, for, no sooner had they gone than the exasperated natives descended the river, and on January 10th drove the officials of the new government from the town. This act was stigmatized by Great Britain as an unwarrantable outrage, and, on the 8th of February, the "Vixen" and "Alarm" again took possession of the port. Captain Loch, with two hundred and sixty marines, followed the retreating Nicaraguans upstream, took the fort at Sarapiqui, and actually reached and besieged Granada, compelling the Nicaraguan Government to accept the terms of peace laid down by him. On the 7th of March, Nicaragua formally and forever relinquished to the Mosquito King the sovereignty which she had claimed over Greytown, and shortly afterwards an English commandant was installed, and the cruisers sailed away.

Great Britain's intention of seizing San Juan was known to the United States Government some time before it was carried into effect, but although the Monroe Doctrine had by this

time become inextricably interwoven with the fabric of our national life, President Polk deliberately neglected this excellent opportunity of applying it in the face of actual European aggression. By the time general attention was attracted to Isthmian affairs by the "Compania de Transito de Nicaragua," an association of Northern capitalists, the *coup* had been accomplished: but the storm of popular indignation evoked induced the Polk administration to send a special agent, Mr. Hise, to Central America, giving him, however, so little power that any of his acts might readily be disowned as unauthorized. Quite without instructions, he negotiated a treaty with Nicaragua, directly controverting British claims and giving to the United States or "a company of the citizens thereof" exclusive interoceanic transit rights in return for a formal recognition of Nicaragua's territorial claims and a promise of protection. The treaty failed of ratification; indeed, it was never submitted to the Senate; and an opportune change of administration facilitated a disavowal of the acts of Mr. Hise, and led to the appointment of Mr. E. G. Squier as his successor. Mr. Squier showed himself quite as hostile to British interests as Mr. Hise had been, but he used more judgment in his opposition, and was largely instrumental in procuring a favorable concession for "The

American Atlantic and Pacific Ship-Canal Company," an organization in which the "Compania de Transito de Nicaragua" had been merged, and which was controlled principally by Cornelius Vanderbilt. The concession carried a monopoly of steam navigation on Nicaragua's inland waters, and granted land for purposes of colonization, while by a treaty simultaneously negotiated, the United States agreed to recognize and defend Nicaragua's sovereignty along the entire line of the projected canal.

Meanwhile the English, having secured control of the eastern terminus, set about acquiring a dominant position near the proposed western outlet in the Gulf of Fonseca. Their first step was to press an old claim for damages against Honduras, threatening Truxillo with bombardment unless immediate payment was made. Anticipating the probable outcome, Mr. Squier concluded a hasty treaty with the Government of Honduras, by which the United States was to acquire land for naval purposes on Tigre Island and for fortifications upon the adjacent shore of the Gulf of Fonseca. Pending the ratification of the treaty, Tigre Island was ceded to the United States for eighteen months, giving her, for the time, at least, control of the western terminus as well as of the canal line. Of course this interfered seriously with English

projects. The demonstration against Truxillo was abandoned, and Chatfield, who had been insisting upon a settlement of the British claims, hurried to the Pacific coast, where, with the aid of a naval force, he seized upon Tigre Island. Squier immediately asserted the sovereignty of the United States and ordered the English to withdraw, a demand which was promptly refused, and which was thereupon repeated with the statement that a failure to comply within six days would be regarded by the United States as an unwarrantable act of aggression. Matters were thus in a critical state when the situation was relieved by the intervention of the Washington government and the negotiation of the Clayton-Bulwer treaty, intended to fix definitely and finally the status of the two rival powers in Central America.

This treaty resulted directly from the publication of the provisions of the unconfirmed Hise compact, which, by recognizing Nicaragua's claim to sovereignty from sea to sea, conflicted with the terms of the Loch treaty, under which Nicaragua had virtually resigned to England the entire eastern coast. An understanding between Great Britain and the United States became necessary, and Mr. Clayton, Secretary of State under the Taylor administration, embarrassed by the hostility of the Senate, decided to carry on negotiations in

secret until a satisfactory agreement had been reached. He therefore explained his position to the British Minister, offering to abandon the Hise treaty, and to aid in obtaining treaties from Nicaragua favorable to both Powers, provided Great Britain would assume a position in regard to the Mosquito claim which should prevent its forming an obstacle. Lord Palmerston, to whom this proposition was submitted, responded favorably, the more readily that Mr. Clayton tacitly admitted the British claims to the Mosquito shore, despite earnest protests from Mr. Lawrence, American minister to England. To facilitate negotiations, Sir Henry Bulwer was sent as temporary minister to Washington. Soon after his arrival he reported to Lord Palmerston that, in his opinion, American interest in the Nicaragua-Mosquito dispute was due to American ownership of a canal concession, and recommended that the Mosquito question be kept distinct from the present discussion, and that American commerce be granted such privileges as would ensure the ratification of the treaty. Just at this time the unexpected news of the British occupation of Tigre Island aroused the Senate to prompt action upon the Squier treaty, which was at once brought up and referred to the Committee on Foreign Relations for immediate consideration. The Committee called for all

papers relating to the subject, but Mr. Clayton refused to submit them, upon the plea that negotiations looking to a settlement of the matter were then in progress. Realizing that his projects would fail unless an agreement was speedily reached, he urged Sir Henry Bulwer to immediate action, and showed an eagerness of which the latter was not slow to avail himself by stipulating that England should be given an equal voice in the control of the canal, and that she should remain in undisturbed enjoyment of her rights along the San Juan in return for a disavowal of Chatfield's seizure of Tigre Island. The acts of their belligerent agents in Honduras were thereupon disowned by both governments, and the famous Clayton-Bulwer treaty was drafted, submitted to Lord Palmerston, and signed on the 19th of April, 1850. It was in substance as follows: Neither Great Britain nor the United States shall ever acquire or maintain exclusive control of the canal, nor shall they assume control of, directly or by means of alliances, or protectorates, nor fortify, any part of Central America; they shall jointly guarantee the neutrality of the canal, and shall afford protection to any legitimate company undertaking its construction: and they shall, in general, protect all lines of interoceanic communication across

The treaty in this form was rati-

fied by the Senate, in the belief that England had abandoned her policy of territorial expansion, and stood ready to co-operate with the United States in the establishment and maintenance of a neutral transit route, but subsequent correspondence between Mr. Clayton and Sir Henry Bulwer changed the whole aspect of affairs. Sir Henry claimed that the provisions of the convention forbidding colonization did not apply to the British settlement in Honduras, or its "dependencies," the Bay Islands and Mosquito Coast, and Mr. Clayton weakly conceded the point, while avoiding a direct admission of England's title to the so-called "dependencies." The treaty, as thus amended, never came before the Senate, and before its promulgation in its original form Mr. Clayton filed the correspondence, which he alone had read, among the archives of the State Department. Thus, as far as the treaty went, England was left in possession of all that she had claimed, while the United States was forever excluded from the Isthmus. Some years elapsed, however, before this was generally known, and meanwhile the Hise and Squier conventions were irrevocably abandoned.

Enthusiasts who thought the Central American question settled were doomed to speedy disappointment, for hardly had the Clayton-Bulwer agreement been signed when an Eng-

lish war-ship landed marines at Greytown. Mr. Chatfield explained this action to the astonished Nicaraguans by asserting that the United States had recognized the sovereignty of the Mosquito King, and he suggested that, as Nicaragua had by the Loch treaty relinquished all claim to the east coast, her government would do well to confine its attention to its own territory. But the United States had also to be reckoned with, and the inevitable crisis was precipitated by the action of Anglo-Mosquito customs officials in attempting to collect port dues from an American vessel. Payment was refused, an English man-of-war fired upon the American craft, and our government promptly called upon Great Britain for an explanation. Lord Granville, who had succeeded Lord Palmerston as Foreign Secretary, disavowed the whole affair, asserting that the commander of the war-ship had acted without orders and that his government would not sustain the claims of the Greytown officials. Thereupon an attempt was made to finally adjust the differences which had arisen, and an agreement was drawn up, subject to the approval of the Central American States concerned: but Nicaragua, jealous of certain concessions granted to Costa Rica, refused to assent to the conditions, and matters reverted to their former state.

A new complication arose from England's action in proclaiming, on the seventeenth of July, 1852, "The Colony of the Bay Islands." Since Macdonald's seizure of Ruatan in 1841, British authority in the Islands had been poorly maintained, and the ratification of the Clayton-Bulwer treaty by England was assumed by the United States to have terminated whatever claims to sovereignty she had ever had. Now, however, during the discussion in the Senate caused by Great Britain's apparent aggression, Sir Henry Bulwer's all-important reservations and Mr. Clayton's note of acceptance were first made public. Popular indignation knew no bounds. Clayton was openly accused of having betrayed his country, and Senators who had voted for the ratification of the treaty asserted that they would never have done so had they known all of its provisions. But the existing situation had to be faced, and as the only solution of the difficulty seemed to lie in proving that neither the Bay Islands nor the Mosquito Coast were "dependencies" of Honduras, an attempt was made to do so. After a careful examination of evidence the Committee on Foreign Relations decided that the position was tenable, and a resolution was drafted and passed by the Senate declaring the establishment of an English colony in the Bay Islands, as well as the British claims to the

Mosquito Coast, to be in direct violation of the provisions of the Clayton-Bulwer treaty. Another diplomatic agent, Mr. Börlund, was sent to the Isthmus, while Mr. Buchanan was entrusted with the task of laying our case before Her Majesty's government and insisting upon English withdrawal from the alleged "dependencies" of British Honduras. Lord Clarendon, then Foreign Secretary, replied that Belize had never been part of Central America, but a British colony; that the Bay Islands were properly a dependency of British Honduras; that the maintenance of a Mosquito protectorate was not at variance with the terms of the Clayton-Bulwer treaty, which merely prohibited further colonization by either contracting power; and finally, that Her Majesty's Government would not recognize the Monroe Doctrine as based upon any principle of international law, nor submit to further questioning as to her rights in Central America. The attitudes assumed by the two Powers were thus diametrically opposed, and the treaty should have been abrogated upon the ground of mutual misunderstanding; but Congress preferred to relieve its feelings in heated discussions which intensified British hostility without accomplishing any good. At last a crisis was reached at Greytown, where the relations of the Transit Company's American employees

and the British element had become more and more strained. Captain Smith, of one of the Transit Company's steamers, shot a Mosquito negro and took refuge with the American Minister, Mr. Borland, who refused to surrender him to the Anglo-Mosquito authorities. A mob attacked the consulate, which Borland and Smith occupied, and a relief force from the American steamer "The Northern Light" was fired upon by the town authorities while attempting to land: but during the following night the Minister and his unpopular guest escaped to the American ship, which sailed north after landing a volunteer guard to protect the property of the Transit Company. Upon learning of this outrage to its representative, the United States despatched the sloop-of-war "Cyane," Captain Hollins, to Greytown to obtain satisfaction. This he did by bombarding the place, despite the protests of the British naval commander present, who refused to move his ship out of range until the "Cyane's" guns were trained upon her, and who asserted that only his inferiority in armament prevented forcible intervention. A provisional government was established by American residents, and had we been in a position to pursue a settled policy the incident might have been greatly to our advantage; but unfortunately the United States was already

distracted by conditions which finally culminated in the Civil War, the views of contending political parties differing so radically as to make national policy a factional matter not to be depended upon.

The appearance upon the Isthmus of William Walker, an American called in by the Liberal party in Nicaragua to aid in the struggle against their Servile opponents, introduced a new element of discord. A successful campaign under his leadership resulted in the establishment of a Liberal government, with Patricio Rivas as president, but with Walker as general-in-chief and real dictator. His action in driving Kinney, an adventurer thought to be devoted to British interests, from the eastern shore, secured him the warm support of all his compatriots in the country, regardless of political proclivities. President Pierce's administration was therefore awkwardly placed when a duly accredited Nicaraguan minister arrived in Washington. Either he must be received, a proceeding sure to antagonize the abolitionists, who looked upon Walker's campaign as a mere device to promote the southward spread of slavery, or he must be sent about his business, which would offend those in whom Great Britain's encroachments upon the Isthmus had awakened feelings of resentment. In this dilemma Secretary Marcy at-

tempted to pursue a temporizing policy, declining to receive the Nicaraguan representative until he could ascertain whether the new government was a legitimate one, thus sacrificing a proffered means of diplomatic communication at a time when a free interchange of views was particularly desirable.

Annoyed at the Administration's unfriendliness, and convinced that the Nicaraguan Government had been systematically defrauded by the Transit Company, Walker induced President Rivas to annul its charter and to seize its property. This proceeding, while perhaps justifiable, was highly impolitic, for it antagonized Mr. Vanderbilt and other influential magnates of the Company, and at the same time interrupted traffic with California and cut off the filibusters' supply of recruits and munitions of war. Supplied with arms by Vanderbilt, and secretly encouraged by Great Britain, Costa Rica attacked her old rival, driving Walker and his forces to Granada and taking possession of the Canal Company's property. Letters which seemed to prove that England was encouraging hostilities for purposes of her own were forwarded to Washington by the American diplomatic agent, and again the question of abrogating the Clayton-Bulwer treaty was agitated, while a revulsion of feeling in official circles led to the reception of a

Nicaraguan minister. Having secured the recognition of his countrymen, Walker had himself elected President, and was inaugurated on the twelfth of July, 1856. On the twenty-second of the following September he annulled the Federal Act of April seventeenth, 1824, abolishing slavery in the then constituent states of Central America, thus displaying the ultimate purpose of his expedition, and thereby antagonizing the natives, without whose support he could not succeed. Failing of anticipated assistance from the pro-slavery faction in the United States, deserted by many of his former adherents, and surrounded at Rivas by a large force of foemen, he was forced to surrender to Captain Davis, of the U. S. S. "St. Mary's," who had been despatched to San Juan del Sur to rescue and deport the besieged filibusters. But notwithstanding the perfunctory opposition of the American authorities, he returned with two hundred adventurers to Greytown, where he was seized by Commodore Paulding and carried to New York, to the great disgust of President Buchanan, who was disposed to look favorably upon his projects. Still undiscouraged, he made a fresh attempt, landing on the island of Ruatan, and afterwards capturing Truxillo, on the mainland. Hardly had the town fallen, however, when a British man-of-war appeared and demanded the surrender of

the filibusters. Resistance was useless, and Walker laid down his arms, relying upon the English captain's promise of protection. How well the promise was kept the sequel showed, for he was treacherously given over by his captor to the Honduran authorities, who court-martialled and shot him. Thus perished, on the twelfth of September, 1860, the chief exponent of forcible American domination of Central America.

In 1856 the United States made another effort to reach an understanding with Great Britain in regard to Central American affairs, and an agreement was drawn up in which England bound herself to abandon the Mosquito protectorate, and to cede the Bay Islands to Honduras. This was conditional, however, upon the ratification by Honduras of two treaties with England, in which it was agreed that the Bay Islands should constitute a free territory, with local self-government under purely nominal Honduran control, and that the Mosquito protectorate in Honduras should be abandoned upon similar conditions. These nominal concessions, made in the interests of the Honduras Interoceanic Railway Company, would really have left England as well off as before, a fact which the United States Senate was shrewd enough to see, and which caused the rejection of the proposed convention.

Diplomatic methods having failed, President Buchanan called upon Congress to abrogate the Clayton-Bulwer treaty. This Great Britain naturally wished to avoid, and she attempted to do so by offering concessions with impossible conditions attached. Thus, she suggested submitting disputed points to arbitration before a European power, well knowing that, as the Monroe doctrine was involved, the result was a foregone conclusion; and she even agreed to abrogate the treaty, provided we would admit all that she had claimed by recognizing the *status quo* of 1852. These suggestions seem to have modified Buchanan's opinions somewhat, and to have caused him to recede from his aggressive position. Meanwhile, Sir William Ouseley was sent to Central America by England to pursue a conciliatory policy, and to negotiate treaties favorable to British interests. The time was propitious, and his efforts resulted in the conclusion of three agreements, with Guatemala, Honduras, and Nicaragua respectively. The Guatemalan boundary was adjusted greatly to England's advantage; Honduras was given nominal control of the Bay Islands and the Mosquito reservation which she had claimed, subject to certain conditions; Nicaragua acquired the nominal sovereignty of the Mosquito reservation within her borders, although provisions for

local self-government practically prevented the exercise of any control by her; and Greytown became a free port of Nicaragua, with an independent municipal government of its own. In return for these apparent concessions, England acquired rights which were of material benefit to her, and which greatly strengthened her position upon the Isthmus.

By the treaty of Managua, the government of the Mosquito Shore was relinquished to a lot of Indians and Jamaica negroes, who, supported by English settlers, antagonized the American residents, and induced them to support Nicaragua in her refusal to pay a promised annual subvention, and in her frequent interference in local affairs. The United States, seeing a chance to restore the cordial relations which semi-official filibustering had disturbed, sustained Nicaragua, with the result that a treaty was concluded between the two countries in June, 1868. This convention was somewhat similar to the rejected Squier compact, although we were prevented by the Clayton-Bulwer treaty from assuming exclusive privileges, and while it has never been thought entirely satisfactory, it has remained in force ever since.

Early in 1876 a commission, appointed by President Grant to examine into the relative merits and defects of various canal routes re-

ported in favor of that through Nicaragua. If the United States was determined to construct and control the canal, as seemed to be the case, the Clayton-Bulwer treaty must be modified, but overtures looking to the accomplishment of this end were abandoned, owing to Nicaragua's shortsighted refusal to grant the necessary concessions unless reimbursed for the bombardment of Greytown. The treaty continued to constitute a serious obstacle to the establishment of the canal project upon a suitable basis, and a widespread sentiment in favor of abrogation crystallized in 1880 in the form of a joint resolution passed by Congress requesting the President to take immediate steps for the final termination of the convention of 1850. It thus devolved upon Secretary Blaine to open the discussion with England anew, and he did so by means of a circular letter to the American ministers abroad, stating that, while the United States had no desire to interfere in the commercial management of an interoceanic canal, she was, nevertheless, determined to maintain political control of the route as a precautionary measure, while guaranteeing its absolute neutrality. But, some months prior to the despatch of this letter, England had suddenly compelled Nicaragua, which had for years failed to pay the Mosquito Indians the annual subvention promised under

the Managua treaty of 1860, to submit disputed points to the Emperor of Austria for arbitration. The result, announced in July, 1881, was practically a reaffirmation of the Mosquito protectorate, and a justification of England's attitude in Central American affairs. Nevertheless, Blaine showed no disposition to recede from his position: indeed, he submitted through our minister in London a long argument in favor of modification or abrogation of the treaty, based upon changed conditions and the professed advantages of placing a neutral canal under the control of the country least likely to be engaged in war. A long diplomatic struggle ensued, in which England stubbornly maintained her ground, and had distinctly the best of it.

As has been said, the government of the Mosquito coast fell into the hands of Indians and Jamaica negroes when the treaty of 1860 took effect, but an influx of foreigners resulted in a practical change of rulers and rapid commercial growth. Nicaragua looked with longing eyes upon the reservation, and when, in 1894, Honduran troops crossed the border, she occupied the town of Blewfields upon pretence of resisting a threatened invasion. Clarence, chief of the Mosquitos, protested, and American and English war-ships were ordered to the spot. The old "Kearsarge," representing the

United States, was wrecked upon Roncador reef, leaving the English to become masters of the situation upon their arrival. Marines were landed, the authority of the Mosquito dynasty was proclaimed, and a provisional government was established. But the United States promptly interfered, demanded and obtained the withdrawal of the British forces, and left the Nicaraguan Government in control of affairs. An insurrection immediately occurred, American and English citizens implicated were arrested and banished, and excitement ran high. But the decree of banishment against the Americans was soon removed, and the United States lent her aid to Nicaragua in inducing the Mosquitos to incorporate themselves voluntarily in the latter country. On the 20th of November, 1894, the Indian reservation became a part of Nicaragua, and England was without an excuse for farther interference. It may be questioned, however, whether this state of things will last, for as late as August 24th, 1900, a delegation from Blewfields waited upon the Governor of Jamaica, to express dissatisfaction with the existing government, and to request British intervention.

In 1850 an effort was made to supersede the ~~Treaty of Guadalupe Hidalgo~~ treaty by one under the terms of which the United States might construct ~~and maintain~~ an interoceanic canal, but the

convention signed by Secretary Hay and Lord Pauncefote proved unacceptable to the Senate and was so radically amended as to be rejected by the English Government. It has been charged that its mutilation in the Senate was inspired by interests antagonistic to the canal project, but such influences, if exerted, can have had but little weight. The real reason seems to have been a widespread feeling that the United States should be at liberty to fortify the canal, and, in general, to administer its own property in its own way, regardless of other nations.

A subsequent treaty, signed by the same plenipotentiaries on the 18th of November, 1901, was more fortunate, and was ratified by the Senate on the 16th of the following December. By its terms the United States may build and operate an interoceanic canal, which shall be open to vessels of all nations on terms of perfect equality. It shall not be blockaded, nor shall any act of war be committed within it or within three marine miles of its termini, but the United States may maintain a military police sufficient for its protection.

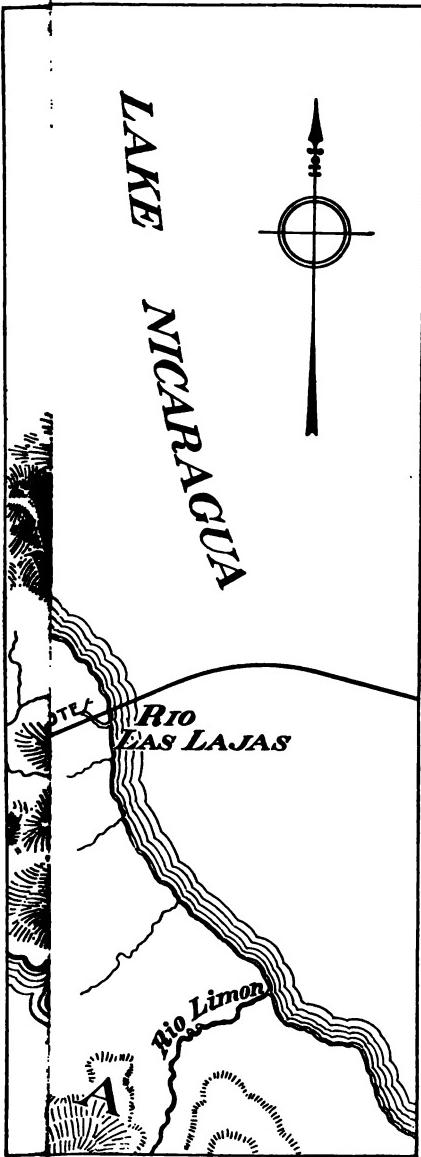
Thus after years of effort the last political obstacle to governmental intervention has been removed, and the long-sought passage to the Indies may soon become a geographic reality.

CHAPTER IV

PHYSICAL CONSIDERATIONS

THE portion of Nicaragua whose topography bears directly upon the problem of canal construction consists of a broad depression bounded on the south by the high volcanic range of northern Costa Rica, and on the north by the mountainous portion of Nicaragua. Within this depression lie Lake Nicaragua, Lake Managua, and the Rio San Juan, a stream which carries nearly the entire drainage of this region to the Caribbean Sea. In former days the continental divide, now west of the lake, ran north and south about where the town of Castillo stands, and the present valley of the San Juan was occupied by two streams, one flowing eastward to the Caribbean Sea, the other westward to a bay of the Pacific Ocean since inclosed by a barrier of volcanic ejecta and now forming part of Lake Nicaragua.

Traversing the Nicaraguan depression from north to south are ranges of hills whose summits, decreasing in height from the axis of the isthmus to the coasts, mark the former level of an undulating plain formed by the action of



streams flowing east and west from the old continental divide. This plain was subsequently destroyed by the erosive action of streams, chiefly during a period when the land was much higher than it now is. A comparatively recent subsidence of the earth's crust plunged portions of the river valleys below sea level, causing them to silt up and form the broad alluvial plains characteristic of their lower reaches.

Residual hills, surviving the general process of degradation because of inherent hardness or fortunate positions upon divides, rise at places above the level of the old plain, particularly along the axis of the isthmus. If the plain were restored, it would extend across the isthmus through gaps in these residual hills, and at an altitude varying from one hundred to two hundred feet above the sea.

In order to obtain a clear idea of the Nicaraguan depression, it will be well to trace the method in which it was presumably formed. It is probable that prior to the formation of the plain already mentioned, a plateau, increasing in altitude to the north and south, extended from the Caribbean Sea to the east side of that portion of Lake Nicaragua which was then a part of the Pacific Ocean. The continental divide was about where Castillo now is, and from it streams flowed east and west along the

present location of the San Juan valley, gradually reducing large portions of their drainage areas to base level, and cutting back toward the divide. After a long period of degradation, the land was slowly elevated to a height some two hundred feet greater than that which it now occupies, greatly increasing the erosive action of its streams, particularly near the coast, where the plain already formed was soon deeply dissected by the same agents which had made it. A subsequent subsidence of the country gradually submerged the lower portions of these eroded valleys, checking the current and allowing a precipitation of alluvium which resulted in the formation of silted estuaries. In the lower valley of the Rio San Juan the deposit of alluvium was such that the present river follows very nearly the bed of the old stream, although in places it has left its former channel, and cut a new one for itself. In the upper San Juan valley, however, the existing channel has been determined largely by the amount of sediment brought down by tributaries, the main stream having been pushed from side to side of the valley by the deltas of its affluents.

The delta formation which characterizes the mouth of the Rio San Juan is of recent and constantly increasing growth. Sediment, most of it from the Sarapiqui and San Carlos tributaries, is delivered somewhat faster than it can

be distributed by the littoral current, so that the delta grows outward and northward, as explained in Chapter II. Its outer edge is but a few feet above sea level, and it rises to the westward at the rate of about one and a half feet per mile. Its surface is dotted with lagoons, some formed by the junction of sand-spits with the mainland, and some by unequal sedimentation due to the interposition of islands or other obstacles to a uniform deposition of sand. These lagoons gradually become choked by vegetation, and silt up until their consistency is such that forest trees grow upon them, and all trace of the lagoons is lost. Numerous low hills, the products of rock decay, rise above the delta plain, as they probably once rose above the sea.

The promontory which separated the Pacific Ocean from the Bay of Nicaragua, afterwards impounded and transformed into a lake, was subjected to influences similar to those described as acting throughout the main Nicaraguan depression. In the present Rio Grande valley the divide, originally near the Pacific coast, moved eastward as the river cut back toward its source, adding new territory to its drainage area, and gradually diverting eastward-flowing streams to its own channel. The greater activity of the Pacific streams was due to their lesser length and consequently swifter current, for the streams flowing to the eastward then reached

sea level about where the island of Ometepe now is. The present continental divide, between the valleys of the Rio Grande and Rio Las Lajas, is a broad plain so level that its summit, 154 feet above the sea, can be determined only by careful instrumental work.

Accompanying the period of depression already referred to as causing the silting up of the mouths of rivers was an outbreak of volcanic activity, which resulted in the formation of a range of craters parallel to the western coast and coincident with the axis of the Bay of Nicaragua. Ejecta from these volcanic vents gradually built a barrier, impounding the waters of the bay and forming a lake, whose level rose with successive additions to the height of the barrier. As the lake was fed by streams whose united discharge exceeded the loss by evaporation, the surplus water presumably escaped to the Pacific Ocean, perhaps through the Rio Grande valley, until the lake surface rose to such a height as to flow over the continental divide at Castillo and into the stream which occupied the lower San Juan valley. The divide at that point probably consisted of deeply weathered rock which yielded readily to erosion and allowed the water to cut its way rapidly to its present position, leaving the western outlet, with its harder bed, as a new continental divide. The presence of sharks in Lake Nicaragua

tends to substantiate this theory of its formation, since they are of a species common in the Pacific Ocean, but unknown in the Caribbean Sea. The lake is a hundred miles long and forty-five miles wide, or about one-third the size of Lake Erie.

Of prime importance in determining the practicability of the Nicaragua canal is a study of the earthquake phenomena of the region, and a consideration of the danger to massive structures to be apprehended from their probable recurrence. Most earthquakes are the result either of explosions at a greater or less depth beneath the surface, or of dislocations of the earth's crust consequent upon an uneven elevation or depression of the country. The latter class of disturbances is hardly more likely to occur in the canal region than elsewhere, and its consideration may therefore be neglected, but the explosive type of earthquake is characteristic of volcanic regions, and is a possible source of danger in some parts of Central America.

The only recent manifestations of volcanic activity in the neighborhood of the canal line have been in the Costa Rican range bounding the Nicaraguan depression on the south, and in the Nicaraguan range extending from the Gulf of Fonseca to the twin peaks of Ometepe and Madera. In the former range one peak

has been in a state of eruption within historic times, in 1726. Of the Nicaraguan chain, Madera, the southernmost peak, is extinct and crumbling. Ometepe, on the same island, discharges small quantities of steam and sulphurous gases, but has been otherwise inactive since 1883, when a trifling eruption occurred. Mombacho, on the mainland near Granada, has been extinct for ages and is crumbling to decay. The last eruption of Masaya, in 1858, was merely an overflow of molten basaltic lava. Momotobo, at the northern end of Lake Managua, emits large volumes of vapor and occasionally shows other signs of activity.

It will thus be seen that volcanic activity near the canal line is in a state of decadence and that, judging from appearances, any further outbreak will be likely to occur near the middle of one of the volcanic ranges. When it is remembered that the destructive effect of an earthquake is limited to a comparatively small area immediately surrounding the epicentrum, there seems to be no reason for anticipating destructive shocks along the line of the proposed canal. Experience tends to show the soundness of this deduction, for shocks which have done much damage in Leon and Managua have been quite harmless at Rivas.

The San Juan river may be divided into three sections, the first extending from the lake

to the head of the Toro rapids, the second from the head of the Toro rapids to the mouth of the San Carlos river, and the third from the mouth of the San Carlos river to the sea.

Throughout the upper division, twenty-seven miles in length, the river flows through an alluvial plain formed in what was once the lake by sediment brought down by tributaries. Sheltered from the prevailing northeast winds, the alluvial deposit has grown westward, notwithstanding the eastward flowing current of the main river. This portion of the stream is deep, with a moderate current, and its banks are swampy, except where its meanderings bring it against the base of some neighboring hill. As I have already explained, the upper Rio San Juan has been deflected from the old river bed in places by the deltas of tributary streams, and it is obvious that, in order to locate a canal requiring a minimum amount of excavation in hard underlying material, the old channel should be traced and utilized as much as practicable.

The second division, from the head of the Toro rapids to the mouth of the Rio San Carlos, flows through a narrow valley and is characterized by a fall averaging two feet to the mile, eighty-five per cent of which occurs at numerous rapids. The Toro rapids are formed by a barrier of boulders, clay, and sand, deposited by

the Rio Sabalos tributary when that portion of the valley was an arm of the lake, and before the old continental divide was cut down to its present elevation. The other rapids are due to the varying hardness of the underlying rock. Portions of the river bed in the lower part of this division are below sea level, showing that it was formed when the land was much higher than at present, and that the greater part of such sediment as now reaches it from its tributaries is transported by the waters of the main stream.

The third division of the Rio San Juan, from the mouth of the San Carlos river to the sea, is quite different in character from either of the preceding ones. Its waters are swift, turbid, and shallow, and the channel shifts continually. This is due to the San Carlos and Sarapiqui tributaries, which, heading in the mountains of northern Costa Rica, transport and furnish to the main stream large quantities of sand, thus supplying material for the river's flood plain and helping to push the delta seaward year by year. The lower San Juan's sharp bend to the left is due to the northward sand-drift along the coast, caused by wave action, and the Rio Colorado is a comparatively new channel cut by the water in its effort to reach the sea without traversing the constantly increasing territory to the northward.

As regards rainfall, the Nicaraguan depression may be divided into two sections, the eastern, extending from the Atlantic coast to the divide between the Caribbean and the lake drainage, and the western, extending from this divide to the Pacific Ocean. In the eastern division the rainfall is heavy, particularly near the coast, where it approaches three hundred inches annually, and it is quite uniformly distributed throughout the year. In the western division it is much less, and there is a well-defined dry season of five or six months, during which little or no precipitation occurs. The eastern slope, bathed in constantly recurring showers, is clothed with a dense virgin forest, which forms an elastic and absorbent cushion, breaking the impact of the drops and distributing large volumes of water so slowly as to prevent sudden floods and consequent rapid erosion of the soil. The result is that the surface of the country, composed principally of tenacious red clay, remains comparatively unchanged from year to year. But in the western division the conditions are very different: during the dry season the foliage is parched, extensive forest fires rage, and the surfaces of numerous clayey llanos shrink and crack in every direction. Consequently when the rains begin, the forest growth, largely denuded of its foliage, offers comparatively little protection to

the underlying soil, which falls a ready victim to the erosive action of the water, while the flat llanos, disintegrated as if by the action of frost, succumb in a measure to the same influence. As might be expected, this division is characterized by steep hills and rugged gullies, very different in appearance from the smooth slopes and shallow watercourses east of the divide.

It is unnecessary at this point to discuss the different classes of material through which the canal must be excavated, as this subject will receive due consideration in a subsequent chapter.

CHAPTER V

CANAL PROJECTS, PAST AND PRESENT

THE project of an interoceanic canal is but a natural development of the idea which impelled Columbus on his first adventurous voyage to the New World and led contemporaneous and subsequent explorers to trace the coast line of the two Americas from Labrador to Cape Horn. Failing in their attempts to find the apocryphal passage to the Indies, the project of excavating an artificial channel to repair the obvious neglect of Nature gradually took form within their minds. Philip II. sent a commission to the Isthmus to make surveys and decide upon the practicability of cutting a canal, but the report was so favorable and dwelt so strongly upon the advantages to international commerce of the proposed work that Philip, whose philanthropy did not extend to alien races, abandoned the project and even decreed death to him who should advocate it. For many years the struggle between England and Spain for supremacy in America kept the problem of trans-isthmian communication in the background, but in 1740 La Condamine,

whom a long residence in Central and South America had afforded ample opportunities for observation, presented a paper before the Academy of Sciences at Paris, calling attention to the importance of an interoceanic canal and advocating the construction of one through Nicaragua. Thirty-one years later the Viceroy of Mexico attempted to discover a suitable location across the Isthmus of Tehuantepec and from 1779 to 1781 Spanish engineers and explorers, unfamiliar with the use of locks, explored the Nicaraguan depression and, convinced of the impracticability of a sea-level cutting, reported unfavorably upon it. But Hodgson and Lee, the English agents on the Mosquito Coast, were favorably impressed by the San Juan valley and expressed themselves so strongly as to interest the British Government and to materially encourage the disastrous invasion of 1780. During the Napoleonic wars Alexander von Humboldt travelled through Central America, reporting favorably upon the Nicaraguan route, which he declared well adapted to the construction of a canal of large dimensions. In 1826 a struggle between English and American projectors resulted in the acquisition by the latter of a liberal concession, but the funds necessary to carry on the work could not be obtained and no construction was attempted. Soon afterwards a

Dutch company was formed with the King of Holland at its head, and in 1830 a franchise was secured, but the opposition of the United States and the outbreak of the Belgian revolution effectually killed the project.

Failing to secure outside assistance, the Central American states decided to construct a canal themselves and Mr. John Bailey, an English engineer, was engaged to make the necessary surveys. His project attracted considerable attention, both in England and the United States, and resulted in the formulation by prominent citizens of New York and Philadelphia of a memorial to Congress asking that the Great Powers, as well as the Central American states, be invited to co-operate with the United States in opening communication between the Atlantic and Pacific Oceans by means of a ship-canal. An agent of the Government was sent to Central America to report upon the project, but the unsettled political condition of the country prevented action and led the semi-independent states to negotiate futile individual contracts with irresponsible or indifferent projectors.

Louis Philippe evinced great interest in the Isthmian Canal problem, but despite the efforts of Don Francisco de Castellon, Nicaragua's minister to France, his attention was directed chiefly to Panama, where the natural obstacles

proved so great as effectually to discourage him. Louis Napoleon was a more promising advocate of the Nicaraguan project and, although his proposed company came to nothing, his pamphlet upon the subject, written after his escape from Ham in 1846, attracted much attention.

In 1849 Northern capitalists formed the "Compania de Transito de Nicaragua," which was soon absorbed in the "American Atlantic and Pacific Ship-Canal Company" organized by Cornelius Vanderbilt and others. The Company's agent negotiated an agreement with Nicaragua providing for the construction of a canal from ocean to ocean, granting land for purposes of colonization and conceding the monopoly of steam navigation upon the Republic's inland waters. Colonel O. W. Childs of Philadelphia, an eminent engineer, was sent down to locate a ship-canal, and it is to him we owe our first accurate topographical knowledge of the Nicaraguan depression. There were at that time two proposed Nicaragua canal routes, Napoleon's, which was to pass through the Lake and emerge on the west in the Gulf of Fonseca, and Oersted's which left the lake near the mouth of the Sapoá river and terminated in the Bay of Salinas. Childs abandoned both these routes, however, and reported in favor of that through the Rio Las Lajas and Rio Grande

valleys to Brito. But in 1858 the Transit Company's concession was declared forfeited for non-compliance with the stipulated conditions and the rights of which the American company was deprived were bestowed upon Felix Belly, of Paris, who, unable to procure the requisite capital, in turn allowed the concession to lapse. Thereupon Nicaragua lost faith in French promoters and again turned to the United States, investing an American company with the privileges of the defunct "American Atlantic and Pacific Ship-Canal Company."

Meanwhile the United States Government had developed an active interest in the canal problem and had inaugurated a series of surveys and investigations which has lasted, with occasional protracted intermissions, to the present day. Extensive explorations of various proposed routes led to the selection, by a process of elimination, of the Panama and Nicaragua locations as the only ones worthy of serious consideration, and of these the latter, with its inexhaustible lake to supply the summit level and its low pass through the continental divide, seemed to American projectors more practicable than the shorter Panama line, crossing and recrossing the torrential Chagres river, whose amenability to control was questioned. In 1872 an Interoceanic Canal Commission was appointed, consisting of General A. A. Hum-

phreys, Chief of Engineers, U. S. A., Captain C. P. Patterson, Superintendent of the Coast Survey, and Commodore Daniel Ammen, U. S. N., and shortly afterwards a naval expedition in charge of Commander Crossman was sent to Nicaragua. Several members of the party, including its chief, were drowned by the overturning of a whale-boat in the surf at Greytown, and the command devolved upon Commander Hatfield, who crossed to the western shore of the Lake and began an examination of various passes through the continental divide. His uncompleted work was continued in the autumn by Commander Lull, with Civil Engineer A. G. Menocal, U. S. N., as his assistant. Lull's location, as finally decided upon, was essentially that adopted by Colonel Childs, except that he traversed the valley of the Rio Del Medio instead of that of the Rio Las Lajas, believing the avoidance of the narrow upper Rio Grande valley worth the cost of the extra excavation involved. The reports of the various surveys, which had comprised all proposed locations on the Isthmus, were completed towards the end of 1875, and on February 7th, 1876, the Commission reported to the President recommending the adoption of the Nicaragua route located by Lull and Menocal as possessing "both for the construction and maintenance of a canal, greater advantages, and offering fewer difficul-

ties from engineering, commercial, and economic points of view, than any of the other routes shown to be practicable by surveys sufficiently in detail to enable a judgment to be formed of their relative merits." Unfortunately this favorable report impressed Nicaragua with the idea that her consent was essential to the establishment of an interoceanic canal and caused her to insist upon the payment of an indemnity for the bombardment of Greytown before granting a concession to American projectors. As the United States still considered the bombardment justifiable, and as Greytown had been beyond Nicaraguan jurisdiction at the time, the demand was refused and the negotiations came to nothing.

In May, 1879, the International Scientific Congress, a creation of de Lesseps and those interested in his projects, met at Paris, ostensibly to decide upon the best route for an interoceanic canal. In response to invitations from the Paris Geographical Society, under whose auspices the Congress was held, several European and American governments sent delegates, while foreign geographical societies and learned bodies were well represented. But the de Lesseps faction preponderated, and it soon became evident that, despite the efforts of honest and unbiased sub-committees and individuals, only the Panama project would be allowed

to receive serious consideration. Convinced that the result of the convention's session was predetermined and could not be influenced by any evidence adduced, many of the self-respecting members withdrew, and the final vote which virtually committed France to the Panama route was cast chiefly by those whose judgment was entitled to little weight or whose motives were open to question.

Upon their return from the Congress, Admiral Ammen and Mr. Menocal, the delegates sent by the United States Government, reported the character of the proceedings which they had witnessed and effectually destroyed the confidence of the American public in the Panama scheme. But faith in the Nicaraguan project remained unshaken and a Provisional Interoceanic Canal Society was organized to arrange the preliminaries of the proposed work. Mr. Menocal was sent to Nicaragua, and succeeded with some difficulty in procuring a concession, dependent, however, upon the formation of a regular canal company and the beginning of work within two years from May 22, 1880. With the co-operation of Generals Grant and McClellan the requisite company was readily organized, but an effort to secure necessary governmental aid was thwarted, largely by the combined efforts of the Panama Canal and Eads Ship Railway

lobbies, which, while opposed to each other, were both actively hostile to the Nicaraguan enterprise. Assistance from the Government being despaired of, an association of capitalists was formed under the direction of the firm of Grant and Ward to undertake the construction of the canal, but the failure of the banking house resulted in the downfall of the project. Thus the concession, although extended two years, expired before anything definite was accomplished, leaving the Panama project for a time without a rival. But on the third of December, 1886, another Provisional Canal Association was formed, and again Mr. Menocal was sent to Nicaragua to obtain a concession. This time he was provided with \$100,000 with which to make an advance payment and, as had been anticipated, he experienced no difficulty in obtaining satisfactory terms. The Nicaraguan Canal Construction Company was incorporated to conduct the necessary surveys and other work, with Mr. Menocal as Chief Engineer, and in 1889 the Provisional Canal Association became the Maritime Canal Company of Nicaragua. Surveys were begun in December, 1887, when Civil Engineer R. E. Peary, U. S. N., reached Greytown with a corps of about forty-five skilled men and a hundred laborers, and in the autumn of 1889 the improvement of Greytown harbor, the first

step in the actual construction of the canal, was undertaken. The projectors, whose financial resources were incommensurate to the enormous task which they had set themselves, were naturally anxious to complete the work and every effort was made to enlist public interest. Early in the spring of 1890, Hon. Warner Miller, President of the Construction Company, set out upon an inspection tour, accompanied by a large party of engineers, journalists, officers detailed for the purpose by the United States Government, and others through whom it was thought the enterprise might receive helpful publicity or gain financial support. Reports by specialists were published and widely distributed, and the matter was brought before Congress, but although the practicability of the project was generally conceded, neither governmental aid nor adequate private funds were forthcoming, and on August 30, 1893, the Construction Company went into the hands of a receiver.

It was subsequently reorganized and simultaneous attempts were made to raise money abroad and to secure immediate government aid, but without success. However, in 1895 Congress provided for an investigation of the engineering features of the project and a board was appointed by the President, consisting of Lieutenant-Colonel William Ludlow, Corps of

Engineers, U.S.A., Civil Engineer M. T. Endicott, U.S.N., and Alfred Noble, C. E., of Illinois. Inadequate funds were supplied and as the date fixed by law for the submission of a report made a protracted study of the problem impossible the Board was obliged to confine itself to an able criticism of the Company's plans, pointing out what seemed to it undesirable features and dwelling strongly upon the necessity of acquiring more information, particularly of a hydrological nature, before adopting a definite plan and proceeding with actual construction. This report, and the congressional hearings to which it led, resulted in the appropriation by Congress of \$150,000 to conduct the investigations recommended and the appointment by President McKinley, in July, 1897, of the Nicaragua Canal Commission, consisting of Rear-Admiral John G. Walker, U.S.N., Captain Oberlin M. Carter, Corps of Engineers, U.S.A., and Lewis M. Haupt of Pennsylvania. Captain Carter was subsequently replaced by Colonel Peter C. Hains, Corps of Engineers, U.S.A. Under the direction of this Commission elaborate surveys were made, systematic hydrological observations were conducted, a careful geological examination of all practicable locations was completed and, for the first time in the history of the Nicaragua canal project, all

data necessary for an authoritative report were obtained. The Commission affirmed the practicability of a ship-canal across Nicaragua, but recommended radical changes in the Canal Company's designs and materially increased its estimate of cost. This report was deemed satisfactory by partisans of the Canal in Congress, but an attempt to pass a bill providing for the prosecution of the work by the United States Government was bitterly opposed, and a compromise was reached under the terms of which the Isthmian canal Commission, charged with the investigation and comparison of *all* proposed interoceanic canal routes, was appointed. This Commission consists of Rear-Admiral John G. Walker, U. S. N., Hon. Samuel Pasco, Alfred Noble, C. E., George S. Morison, Colonel Peter C. Hains, Corps of Engineers, U. S. A., William H. Burr, C. E., Lieutenant-Colonel Oswald H. Ernst, U. S. A., Lewis M. Haupt, C. E., and Professor Emory R. Johnson. It is hardly conceivable that its researches can fail to fix forever the relative status of rival routes across the Isthmus. Meanwhile the Maritime Canal Company's concession having expired, that of the so-called Eyre-Cragin syndicate became effective, but has in turn been forfeited for non-compliance with the requirements.

Having thus summarized the history of a

great undertaking, let us briefly consider its engineering features.

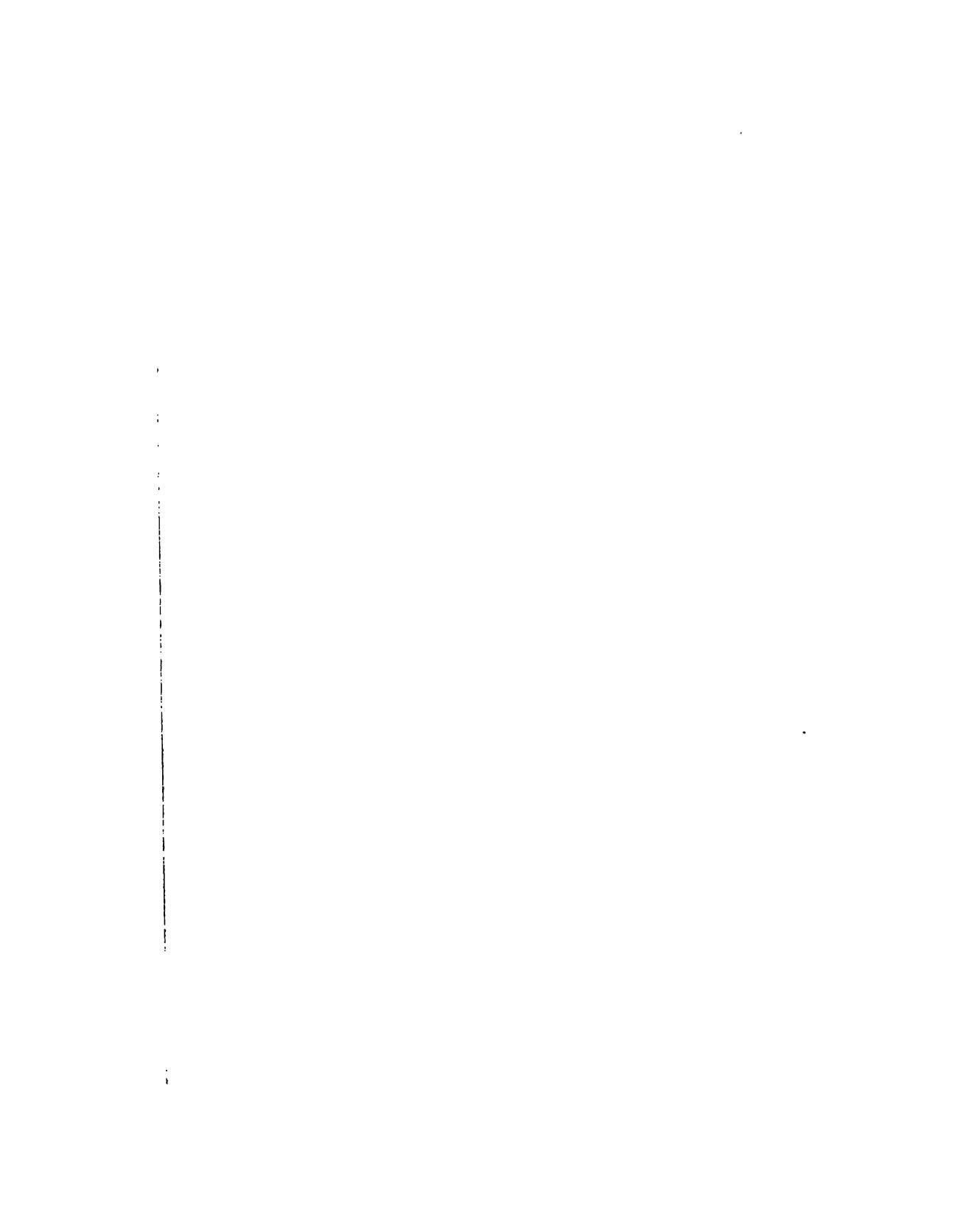
In all projects for an interoceanic canal through Nicaragua, the Lake, which is the chief source of water supply and defines the summit level, is the controlling feature. Upon its fluctuations depends the practicability not only of constructing and maintaining, but of navigating, the proposed waterway. Unless artificially augmented, an insufficient outflow through the Rio San Juan consequent upon a season of unusual dryness would reduce the depth of water in the canalized channel below the requirements of commerce and consequently evaporation, leakage, and loss due to lockage must be estimated and provided for. On the other hand, an unusual rainy season might produce floods which, unless skilfully controlled, would endanger the integrity of the works and render navigation difficult or impossible. It will thus be seen that in studying the canal problem an understanding of the fluctuations of the lake surface is quite as important as familiarity with the topography of the country, and it was in this and other hydrological knowledge that former projectors were deficient.

There have been five canal projects based upon actual surveys, the first being that of Colonel Childs, an engineer of high repute who, in 1850, 1851, and 1852 carefully exam-

ined various locations in behalf of the then existing Transit Company, submitting a report which has formed the basis of all subsequent investigations, and which contains much valuable information not to be found elsewhere. After studying several routes between the Lake and the Pacific Ocean, he fixed upon that through the Rio Las Lajas and Rio Grande valleys as possessing more advantages than any other, an opinion sustained by the recent investigations of the Canal Company's engineers and three government commissions. On the east side he proposed to canalize the San Juan river by means of seven dams, the upper one situated at Castillo and the lower half a mile below the mouth of the Rio Sarapiqui, where the canal was to leave the river and follow its left bank to Greytown. On the Pacific side the summit level of 108 feet above the sea was carried westward $9\frac{3}{4}$ miles from the Lake by a dam across the Rio Grande valley at Buen Retiro, thus giving an uninterrupted navigable stretch of river, lake, and canal from Castillo on the east to Buen Retiro on the west, a distance of 118 miles. The project contemplated a depth of 17 feet and a bottom width of 50 feet, except at turnouts, where it was to be increased to 90 feet, and the locks, of which fourteen were to be used on each side of the summit level, were to be 250



THE FORT AND RIVER FRONT, CASTILLO.



feet long, 60 feet wide, and 17 feet deep, with a maximum lift of 8 feet. The total inadequacy of these dimensions to meet the demands of modern commerce should be borne in mind when Childs' estimate of \$31,538,319 is compared with those submitted by subsequent projectors for works of far greater magnitude, nor should it be forgotten that Greytown was at that time an excellent harbor, needing none of the costly improvements which have since become imperative.

The second, or Lull, project was the result of a re-examination of the Childs route in 1872 and 1873 by a United States Government expedition. It contemplated a canal 26 feet in depth, and on the west side of the lake it adopted the valley of the Rio Del Medio instead of that of the Rio Las Lajas as a means of reaching the Rio Grande. The Medio divide is much higher than that of the Lajas, but a trifling shortening of the line and the avoidance of the narrow, crooked gorge of the torrential upper Rio Grande were thought to justify the increased expenditure attendant upon heavier excavation. Eleven locks, 400 by 70 by 26 feet in size, with a maximum lift of 10.5 feet, were to furnish a means of ascent from the Pacific Ocean to the Lake, while the descent on the Caribbean side was to be accomplished by ten locks of similar dimensions,

but with a maximum lift of 10.87 feet. The summit level, 107 feet above the sea, was to extend eastward to Castillo, where the first of four dams designed to canalize the river was located. At the last of these dams, a mile below the present mouth of the Rio San Carlos, the canal line left the river and followed its left bank to the San Juanillo, whence it took a direct course to Greytown. The lower San Carlos was to be diverted so as to flow into the San Juan below the fourth dam, thus avoiding possible trouble from its flood waters. Different bottom widths, varying from 50 to 72 feet, were adopted for different sections of the canal, and excavated river channels were to be 80 feet wide. Greytown harbor, which had been destroyed by sand movement since the formulation of Colonel Childs' project, was to be restored at an estimated expense of \$2,500,000, and the probable cost of the entire work was placed at \$65,722,147.

The third project, that of 1885, was elaborated by Mr. Menocal after a partial re-examination of the Lull location. It contemplated a canal with a minimum depth of 28 feet, a bottom width of 80 feet and locks 650 feet long and 65 feet wide. Channels excavated in the river were to be 125 feet broad and those in the lake, 150 feet. On the west side the Childs route through the Lajas and Rio Grande

valleys was adopted, the danger from floods in the narrow gorge of the latter stream being eliminated by diverting its upper course eastward into Lake Nicaragua. On the east side the Rio San Juan was to be canalized by the construction at Ochoa, a point 69 miles from the Lake and $3\frac{1}{2}$ miles below the mouth of the Rio San Carlos, of a huge dam rising to a height of 106 feet above the sea, or nearly 60 feet above the normal surface of the river. It was thought that this dam would hold the water of the lake at a constant elevation of 110 feet above the sea, flooding the river valley and thus saving a vast amount of excavation. In order to carry the canal from the Ochoa dam directly towards Greytown at the same high level, extensive embankments were planned across the valleys of several small tributaries of the Rio San Juan, converting their lower reaches into lakes joined by short lengths of canal, and beyond these a cut with a maximum depth of 320 feet was to lead through the divide to the first of a series of three locks connecting the summit level with the tide-water section terminating at Greytown. The entire cost was estimated at \$64,036,197. It was a daring and attractive scheme, similar in most respects to that finally adopted by the Canal Company and known as the Canal Company's high level line.

This project, the fourth of those under consideration, was a development by Mr. Menocal of that of 1885. The bold and striking features which he had then introduced were retained, the Lake being held at an elevation of 110 feet above the sea by a dam at Ochoa rising to a height of 106 feet and the canal running thence to the divide through a series of basins formed by impounding streams tributary to the lower San Juan. The three locks of high lift were also retained and the only radical change was on the west side of the Lake, where the canal totally in excavation was discarded and the Lake level carried to within four miles of the Pacific by a high dam closing the gap in the La Flor Hills through which the Rio Grande flows, forming of the Tola Basin an artificial lake 4.6 miles long communicating with Lake Nicaragua by a high level canal.

This plan is open to many strong objections. It necessitates the construction of two huge dams, neither of which can rest upon a secure foundation unless carried to an extreme depth, and one of which, that at Ochoa, must be built directly in the river San Juan, which cannot be diverted from its course. A long line of dams and embankments, the failure of one of which might be attended by serious consequences, must be constructed and care-

fully maintained to form a series of communicating pools and carry the high level eastward from the Ochoa dam; and finally, the crests of dam and embankments must be raised four feet higher than was estimated and extensive regulating works must be installed, at an enormously increased cost, if the Lake level is to be maintained at 110 feet as proposed. The Canal Company's assumption that the surface of the Lake would remain four feet higher than the crest of the Ochoa dam is probably erroneous, the consensus of expert opinion being that near the end of the dry season the slope in the Rio San Juan would be almost inappreciable. Mr. Menocal proposed to discharge practically all the waste water of the Lake and upper San Juan valley through the river and over the crest of the dam and embankment weirs, but the investigations of the Nicaragua Canal Commission show that instead of 63,000 cubic feet per second, which Mr. Menocal assumed as the maximum discharge, an amount probably reaching 200,000 cubic feet per second must at times be wasted. Even were this practicable without danger to the dam, it would induce a current in the adjacent canalized portion of the river which would not only make navigation difficult but might erode the banks and injuriously affect the artificial channel. This problem of dis-

posing of surplus water was studied by the Nicaragua Canal Commission, which recommended the construction of a supplemental waste-way to the Pacific, as will be explained in the discussion of their project.

The feature of the Canal Company's plans which evoked more criticism than any other was the Ochoa dam, upon which the practicability of the entire undertaking was thought to depend. This structure was to be built where no suitable foundation could be obtained short of 17 feet below the sea level, or 123 feet below the crest of the dam as at first proposed, while the impossibility of diverting the river during construction led to the adoption of a rock-fill dam, formed by dumping rock into the water, and allowing it to arrange itself. It need hardly be said that such a structure 1900 feet long, and rising about 56 feet above the normal river surface, would be a costly experiment, the success of which, in view of the fact that its crest was expected to serve as a weir for the discharge of large volumes of surplus water, is problematical. Its advocates claimed that numerous weirs built in India to raise the surface of streams, and divert water into irrigation channels, furnished precedents for such construction, inasmuch as they were founded upon sand, and were frequently built of dry rubble, but a little investigation shows the fal-

lacy of this argument. In the first place, Indian weirs are merely obstacles to the flow of streams, and their absolute integrity is a matter of little moment, while the Ochoa dam could suffer no material damage without serious and far-reaching injury to the canal system. Moreover, Indian dams are carefully built by hand during the dry season, and when, as is often the case, they are damaged or destroyed by floods, they are repaired or replaced during the ensuing dry season. Again, Indian weirs are comparatively low, and when a large volume of water is passing over them, are deeply submerged, while the crest and long down-stream slope of the Ochoa dam would necessarily be exposed to the full fury of the flood.

The proposed La Flor dam presents no difficulties which cannot be readily overcome, but its magnitude, increased by the fact that sandy silt unsuitable for foundations extends to a depth of 45 feet below the sea-level, renders its construction inexpedient unless great advantages result.

This project of the Maritime Canal Company is criticised at some length, in order that the reader may appreciate its chief defects, and understand why changes recommended by the Nicaragua and Isthmian Canal Commissions are deemed necessary. Moreover, it is interesting as being the only one in accordance with

which actual construction has been attempted, decaying buildings, rotting dredgers, teredo-eaten breakwater, and four thousand feet of half-dredged canal at Greytown remaining to mark the beginning of a great undertaking.

The project recommended by the Nicaragua Canal Commission was a modification of that of the Canal Company and contemplated a canal 30 feet in depth with a minimum bottom width of 150 feet, increased to 300 feet in river sections, and a minimum radius of curvature of 3,000 feet. The locks, of which there were to be six on the Caribbean slope and four on the Pacific side, were 80 feet wide and designed to receive a ship 620 feet in length. These dimensions were deemed amply sufficient for modern shipping and as all rock cuts were to be carried two feet below grade it was thought that the entire channel could be deepened by dredging, if necessary, without seriously interfering with traffic. The summit level was shortened by abandoning the proposed Ochoa dam and constructing one above the mouth of the Rio San Carlos, thus avoiding the sediment-laden flood waters of the latter stream, whose estimated maximum discharge is 100,000 cubic feet per second. Hard rock suitable for a foundation occurs 15 feet below the sea-level and a concrete dam with suitable regulating works was projected. The canal left the river

just above the dam, locking down almost immediately to a lower level and following the left bank to the San Juanillo, whence it ran across country to Greytown, keeping to the east of Lake Silico and occasionally dropping 18.41 feet when topographical conditions and suitable foundations made a lock advisable. Thus the heavy divide cut over three miles long and the system of embankments proposed by the Canal Company were avoided, as were also the flood waters of the San Carlos, which were to be discharged below the dam.

It will be observed that the practical elimination of the San Carlos drainage by changing the dam-site from Ochoa to Boca San Carlos would reduce the maximum discharge through the works to 100,000 cubic feet per second, an amount which, while less of a tax upon spillway capacity, was still thought sufficient to impede navigation somewhat and to injuriously affect artificial river channels. The Commission therefore deemed it advisable to drain part of the surplus lake water westward into the Pacific Ocean, thus preventing destructive floods in the San Juan river and permitting the establishment of regulating works so near the lake that their operation would be almost immediately effective. No low pass in the divide being available for a separate channel, the cross section of the summit level cut from

the lake westward was so increased as to allow of its use both as waste-way and canal. Suitable controlling works were planned at Buen Retiro, 9.8 miles from the lake, where the summit level ended and the canal location and waste-way diverged, the former skirting the foot hills which bound the Tola Basin on the south and the lower Rio Grande valley on the southeast, the latter following the general course of the river, cutting off bends when necessary to avoid the vicinity of the canal line and debouching in the shadow of Brito Headland. The La Flor dam was abandoned, its advantages being thought incommensurate to its cost, and four locks, the first at Buen Retiro, the last about a mile from the beach at Brito, led the canal by easy stages from the 110-foot summit level to that of the sea.

The maximum discharge from the lake is estimated at 50,000 cubic feet per second and an ideal arrangement would permit of the diversion of this entire volume of water into an independent waste-way leading to the Pacific; but unfortunately, as we have seen, a separate channel is impracticable, and although the summit level of the canal might be enlarged so as to discharge the full amount without unduly eroding its banks or interfering with navigation, the character of the lower Rio Grande valley is such that the creation of a

torrential river within its confines would be a menace to the safety of the works. The soil is light and very susceptible to the action of running water, while the depth to bed rock is so great as to prevent the interposition of a permanent and effective barrier between the stream and the canal. Under these circumstances it was thought best to limit the discharge from the lake to the Pacific to about 15,000 cubic feet per second, letting the overplus flow down the Rio San Juan as of old.

This project of the Nicaragua Commission was gradually segregated from various chrysalid schemes, the results of contemporaneous surveys, hydrologic observations, and geological examinations furnishing a constantly increasing mass of reliable data for consideration. Numerous variants were studied. The relocation of the Ochoa dam above the mouth of the Rio San Carlos and the construction of a canal thence to Greytown substantially as projected by Mr. Menocal was considered; so, too, was the building of a dam and lock at Machuca, permitting a descent of from 24 to 30 feet, and a corresponding reduction in the height of the Ochoa dam, but involving a corresponding increase in the depth of the divide cut. It is impracticable in a single chapter to discuss the relative defects and merits of each of innumerable projects investigated; suffice it to say

that the plan finally recommended by the Nicaragua Commission seemed to combine more advantages with fewer disadvantages than any other which had been suggested.

The entire length of the route was 189.98 miles, of which 139.3 miles was summit level and 71.34 miles in the lake, while the total cost of construction, adhering to the dimensions already specified, was estimated by two members of the Commission at \$118,113,790, and by the third member at \$134,818,308. Of 152,781,270 cubic yards of material to be moved, 99,296,592 yards could be dredged, 45,156,308 yards were earth which must be handled otherwise, 7,573,992 yards were rock above water and 754,378 yards were rock under water. The earth varies from soft rock to fine silt: the rock between Lake Nicaragua and the Caribbean Sea is basalt, dacite, and sandstone, the latter in very small quantities: and the rock between Lake Nicaragua and the Pacific is thinly stratified shale and sandstone. The basalt and dacite are hard to excavate, although less so than granite, but the shale and sandstone on the Pacific side are of such consistency that in most places they may be readily handled with steam shovels.

The project of the Isthmian Canal Commission is essentially that of the Nicaragua Com-

mission, such changes as have been made being chiefly attributable to the constantly increasing size of ocean-going ships and to the acquisition of more precise topographical and physical information concerning the country through which the canal must pass. Instead of a 30-foot canal, one 35 feet in depth is contemplated; that is, one capable of navigation by the largest freight steamers now afloat or in course of construction. A few existing freighters are 600 feet long and draw 32 feet in salt water, or about 33 feet in fresh water, and the indications are that these dimensions will be somewhat exceeded in the future. If, then, the inter-oceanic canal is to afford safe passage to all classes of shipping, the proposed depth of 35 feet is none too great, but carrying the excavation 5 feet deeper than was contemplated by the Nicaragua Commission greatly increases the estimate of cost. This is due partly to the greater amount of material to be removed—for the additional 5 feet in depth affects not only the bottom of the prism, but its side slopes as well—and partly to the fact that rock or other indurated material will be encountered in many places where the shallower excavation would have escaped it.

Apart from this increased depth, the Isthmian Canal Commission's project differs from that of the Nicaragua Commission chiefly in

the substitution of twin locks for single ones, in the relocation of the dam at the eastern end of the canalized river section, and in the abandonment of the projected spillway from Lake Nicaragua to the Pacific Ocean.

Twin locks are proposed in order to insure uninterrupted navigation, should one lock be closed for repairs. They are to have a clear length of 740 feet, but intermediate gates will be so arranged that shorter locks can be formed for small vessels, thus reducing to a minimum both the time and water consumed in locking. They are to be 84 feet wide.

The dam forming the eastern end of the canalized river, located by the Nicaragua Canal Commission at Boca San Carlos, is relocated at Conchuda, two miles farther upstream, where the depth of bed rock below low water has been found to be 82 feet, or 38 feet less than at Boca San Carlos. As the foundations will probably have to be placed by the pneumatic process, this is a matter of much importance. The main part of the structure is to consist of caissons placed close together, with the joints between them sealed, supporting a monolithic concrete structure above low water. This portion of the dam, 731 feet in length, is to be flanked by two 100-foot sections built into the hillsides in open excavation, and core walls are to extend 100 and 240 feet farther, respectively,

on the Costa Rican and Nicaraguan sides. Thus the entire structure, founded on rock throughout, will have a total length of 1,271 feet, and will support 21 sluice gates of 30 feet opening each, which, in conjunction with 32 similar gates in a concrete dam half a mile on the Costa Rican side, will afford means of regulating the lake level within satisfactory limits.

The waste-way to the Pacific is abandoned as involving much additional excavation without materially simplifying the problem of lake control. Since water from the surrounding drainage basin finds its way to the lake slowly, a marked rise in lake level consequent upon heavy and widespread rainfall may be foreseen two or three weeks before its occurrence. It will therefore be practicable to open the Conchuda sluices in anticipation of coming floods, and to distribute the waste of water over a considerable period of time, avoiding objectionable currents and preserving the integrity of the banks.

The Isthmian Canal Commission recommends eight locks, four on each side of the summit level, and departs slightly from the Nicaragua Commission's location in places, making the total length of canal and harbors 183.66 miles. Of this distance, 70.5 miles are in the lake. The total cost is estimated at

\$189,864,062, and it is thought that six years will be required after the inception of the work to entirely complete it.

An argument against the Nicaragua Canal frequently advanced by advocates of rival projects is that the absence of natural harbors at the termini will necessitate the construction of costly breakwaters, and will entail, at least at Greytown, a considerable annual expenditure for dredging. This is true, but it is nevertheless thought that the advantages of the Nicaraguan location are sufficiently great to justify the establishment and maintenance of the necessary harbor works.

As has been said in a previous chapter, the harbor of Greytown, which fifty years ago was available for large sea-going ships, has been destroyed by the westward creep of sand brought from Costa Rica by the San Carlos and Sarapiqui tributaries of the Rio San Juan and carried by wave action along the coast in opposition to the littoral current.

The Canal Company proposed to open and maintain an entrance through the bar thus formed by building a jetty perpendicular to the shore line and extending to the 6-fathom curve, some 3000 feet distant, and by dredging a channel to leeward of it. It was thought that the jetty would arrest the sand-drift until the re-entrant angle to the eastward, formed by pier

and shore line, was filled, when an extension of the structure would be necessary to avoid the formation of a bar across its end. Thus, periodic additions were to be made to the jetty until the new artificial shore line became perpendicular to the direction of the sand drift, when it was thought that no more trouble would be experienced. This method of dealing with the problem has been deemed insufficient by certain subsequent investigators, although the construction by the Canal Company of 937 feet of the proposed breakwater was attended with good results.

The Nicaragua Canal Commission proposed to establish an entrance 7,500 feet east of that projected by the Canal Company by building two stone jetties, 600 feet apart, extending seaward in a northerly direction, or about normally to the present coast line, thus affording shelter from the prevailing northeasterly sea. The easterly jetty was to be about 2,670 feet in length, the westerly about 2,500 feet, and at their shoreward end a harbor approximately 5,000 feet long and 1,000 feet wide was to be dredged. Of course the sand would gradually extend northward along the eastern jetty, but as deeper water was reached its encroachments would be less marked, and when it reached the end of the breakwater the structure could be extended or systematic dredging resorted to,

to maintain the channel. The amount of sand to be controlled was estimated to vary from 500,000 to 730,000 cubic yards annually.

The Isthmian Canal Commission recommends the construction of a harbor analogous to that undertaken by the Maritime Canal Company but about one mile farther east. A jetty consisting of loose stones of irregular shape and size is to extend in a direction a little west of north to the 6-fathom curve. On the west side of this jetty a channel of moderate depth will scour out, and this channel is to be enlarged by dredging, a second parallel jetty being constructed to the westward, if necessary, to intercept such sand as comes from that direction. It is not expected that this entrance will maintain itself, and the necessary dredging will form one of the operating expenses of the canal. The harbor is to have a length of 2500 feet and a width of 500 feet, with a turning basin 800 feet wide at the inner end.

There is no harbor at Brito and the range of possible locations for an artificial one is limited by the precipitous rocky headland known as Brito Head and by a rocky hill some 7,000 feet to the southeastward. These two eminences are the termini of the ranges of hills bounding the valley, which in its lower portion is a silted estuary extensively inundated at

high tide and overgrown with a tangled mangrove forest.

The beach, which extends from the southeastern hill to the mouth of the Rio Grande, is of white sand quite different from the material brought down by the river, and this, with the fact that the shore line seems to have remained unchanged for many years, may be accepted as proof that a littoral current whose action is limited by the adjacent rocky headlands, operates to prevent the further encroachment of sedimentary deposits and to maintain the beach and neighboring sea bottom as they exist at present.

The prevailing winds are off-shore, the waves are of moderate height and no indications of destructive storms from the sea are discernible.

The Nicaragua Canal Commission proposed to build a jetty from a point on the beach about midway between its rocky termini, extending seaward in a south-southwesterly direction to the 7-fathom curve and sheltering a channel 600 feet wide dredged along its western side to an inland harbor 135 acres in extent excavated in the low alluvial plain. Sheltered on the east by a stone breakwater and on the west by Brito Head, the entrance would be accessible in all weather. San Juan del Sur, directly open to the sea, is considered a good harbor

and is regularly visited by ships of the Pacific Mail Steamship Company.

The harbor proposed by the Isthmian Canal Commission is essentially that recommended by the Nicaragua Commission. It is to be 2,200 feet long and 800 feet wide, or 40.4 acres in extent, the breakwater is to extend to the 6-fathom curve, and the entrance is to be 500 feet wide.

CHAPTER VI

NARRATIVE — GREYTOWN TO RIVAS

ON the twenty-first of December I was directed by the Chief Engineer to organize and equip my party and proceed by the first available steamer to Rivas. The Commissary department was in great confusion, as the supplies had just arrived and nobody knew where anything was, but by a vigorous attack upon the storehouse and a liberal application of the principle that "possession is nine points of the law" I secured the essentials for our campaign, leaving the members of subsequent parties to indulge in derogatory remarks about my character and probable ultimate destination. Nine assistants had been assigned to me, and we worked all Christmas day, confining our celebration to the evening, when a bowl of punch was brewed, and drained by all hands to "sweethearts and wives." By Sunday night all our freight was loaded, and early Monday morning the boat went to La Fé, where we embarked in the midst of a furious rainstorm. We passed Greytown without stopping, and entering the narrow

channel which connects the lagoon with the river, made our way slowly into the main stream, which we ascended against a stiff current. The banks were low and marshy, lined with thickets of cane and tall grass or clumps of large-leaved palms, which at times almost brushed the railing of the boat, as we rounded a bend or hugged the shore to avoid the force of the current. At eleven o'clock we breakfasted on the covered deck abaft the main deck-house, the rain rattling upon the roof above us and whipping the broad expanse of river into a mass of spray. Lobster served with raw onions, canned corned beef, canned salmon, beans, plantains, yucca, boiled potatoes,hardtack, and fresh bread furnished a sufficiently varied meal, but we had parted too recently from the fleshpots of Egypt to accord it the attention which we afterwards learned it deserved. Not the least interesting of our surroundings was a squad of four soldiers, commanded by an officer, whose duty it was to protect the boat from the attacks of revolutionists. Clad in overalls and straw hats, devoid of shoes, and armed with old Remington rifles, our guards did not present a military appearance, nor did Powell's discovery that one rifle, at least, was full of water, tend to increase our awe of them.

As we proceeded, the banks became some-



what higher, but until late in the afternoon we were in the delta country, low, swampy, and overgrown with a dense mass of tropical vegetation. Occasionally a few banana trees half hid a little thatched cane hut on some high spot on the bank, and once or twice we saw dugouts drawn up upon the shore; but except for these signs of man's presence the wilderness seemed uninhabited save by monkeys and strange aquatic birds of varied hues. We stopped once to take wood from a thatched pile upon the bank and then breasted the stream again until nearly midnight, when we paused to land Ehle's party, which we had brought with us. They landed with their outfit, cutting their way into the sombre, dripping jungle, and we gave them a cheer and left them.

The country a few miles from the river is almost unknown territory, although there are probably few tributary streams which have not been ascended by venturesome rubber-hunters. These hardy pioneers, with a slender supply of food and camp equipage, penetrate the utmost depths of the wilderness in the pursuit of their arduous but profitable calling, and possess a topographical knowledge obtainable in no other way. Upon the arrival of a party at a suitable locality a camp is established, the buildings being framed of poles tied together with vines

and thatched with palm leaves. Available rubber trees are then selected and slashed with machetes, each pair of cuts forming a V and the points being directly over one another. A spout is inserted at the bottom of the series to lead the milky sap into buckets placed to receive it. A large, vigorous tree will yield as much as twenty gallons of sap, each gallon of which makes about two pounds of rubber. The milk when collected is mixed with the juice of a certain vine possessing the peculiar property of coagulating it almost immediately; the resulting mass is pressed or rolled together and dried for a fortnight, after which it assumes the color and elasticity of the rubber of commerce. It should be noted that Central American rubber is obtained from a species of wild fig (*Castilloa elastica*), quite different from the rubber tree of South America.

When we awoke the next morning the appearance of the country had changed, and we were running through a hilly territory so heavily wooded that the mass of foliage upon the bank seemed solid. There were more signs of human occupancy, especially upon the Costa Rican side, and every few miles we passed little cane huts thatched with palm leaves and surrounded by banana trees. We had left the silted estuary of the San Juan, with its endless succession of silico swamps



CASTILLO.

and lagoons, and had passed the site of the proposed Ochoa dam in the darkness.

At about ten o'clock we reached the foot of the Machuca rapids, where we stopped at a little station to deliver some mail and to get up sufficient steam to run the next mile. The rapids were not so bad as I expected, and we passed them without difficulty, although rather slowly. At three o'clock we reached Castillo, where the custom house is, and where we had been told that we should have no trouble, as arrangements had been made for passing all our possessions through without examination. As a matter of fact, however, no word had been received regarding us, and had it not been for an influential acquaintance whom we first met upon the boat, some of our effects would have been seized. We experienced a good deal of annoyance and delay, but finally got through and returned to the boat for the night. From the hurricane deck we had a good view of the interior of the custom house, and some of the proceedings which we witnessed amused us considerably. As all duties are determined by weight, it was manifestly proper that everything should be weighed, but the sight of three straw hats poised in solitary state upon large platform scales was a pleasing novelty. During the evening I received a visit from the Commandante of the Port, who had evidently

been dining "not wisely but too well" and was embarrassingly friendly. He finally departed after shaking hands a dozen times, and saying "Good-bye, my dear!" in affectionate accents. I afterwards saw him enforcing discipline among his barefooted soldiers with a cocked revolver.

The town is not uninteresting. There is an old Spanish fort, from which the place is named, upon a steep hill close to the river, and along the bank runs the single street of the town. All the houses drain into it, and the result is a slimy, offensive thoroughfare, encumbered with pigs, chickens, and naked children. The best houses are wretched structures of wood and adobe, while the others are built of cane, and can be seen through like lattice work. The population of the place, although small, seems much in excess of its lodging capacity, and the quantity of clothing distributed among the people strikes a stranger as insufficient. Men bathe in the river within a few feet of the street, and women do their washing clad only in skirts, whose wet, transparent folds accentuate rather than conceal their forms.

In 1780, Castillo, then a Spanish military post, was assailed and captured by English troops under Colonel Polson, assisted by a naval contingent commanded by Captain (afterwards Lord) Nelson, in a gallant endeavor to accomplish a project devised by General Sir

John Dalling, Governor of Jamaica. This project, as has been explained in a previous chapter, was to take possession of the San Juan river, Lake Nicaragua, and the cities of Granada and Leon, thus interrupting the communication of the Spaniards between their northern and southern colonies, and at the same time obtaining control of the most practicable route for an interoceanic canal. Dalling's plans were well conceived, but his ignorance of local conditions led to disastrous failure. Five hundred men detailed to accomplish this blow at Spain's sovereignty were convoyed by Nelson from Port Royal to Cape Gracias á Dios, and thence—after being reinforced by part of the 79th Regiment—along the Mosquito Coast, stopping frequently to communicate with and propitiate the Indians, who were induced to furnish canoes and boatmen for the ascent of the river. It was not intended that Nelson should accompany the expedition beyond Greytown, but he was not the man to turn back when so much was to be accomplished, and with a force of seamen he joined the party as a volunteer. An advance guard of two hundred men, embarked in canoes and ship's boats, set forth against a foe entrenched in an unknown tropical wilderness and aided by climatic and physical conditions with which General Dalling had neglected to reckon. It was the end of

the dry season. The river, scantily fed from the fast subsiding lake, was shoal and full of bars, over which the intrepid adventurers were forced to drag their boats. The sun, shining with fierce brilliancy, was reflected from the glaring sand, and dense masses of foliage which lined the banks interrupted the cool trade-wind and made of the half dry river-bed a pitiless fiery furnace. As the party advanced the water became deeper, but an adverse current and occasional rapids made progress slow and laborious. On the ninth of April they reached the island of Bartola, defended by a small work mounting nine or ten swivels and manned by a score of men. Nelson, at the head of a few seamen, took the place by storm,—“boarded” it, as he said,—ably supported by Captain Despard of the Army. Proceeding onward, the entire party disembarked some miles below Castillo, landed their supplies and ammunition, and advanced through an almost impenetrable forest to attack the fort. One of the men was bitten by a snake hanging from the limb of a tree, and almost before his companions had passed from sight he was dead, and putrefaction had set in. Nelson himself barely escaped death from a venomous serpent, only to be seriously poisoned by drinking from a spring into which some boughs of the manchineel had been thrown.



UNDA
An



The expedition reached Castillo on the eleventh of the month, and Colonel Polson decided to besiege the fort, despite Nelson's urgent entreaties that it be immediately carried by assault. Valuable time was lost. The rains set in, sickness assailed the ranks of the invaders, and had the little garrison of two hundred and twenty-eight men been able to prolong its resistance the place need not have fallen. The surrender, made necessary by English occupation of a commanding eminence in the rear, occurred on the twenty-ninth of April, but it failed to afford the besiegers the relief which they had anticipated. The fortress was in a state to be appreciated only by those familiar with Central American disregard of sanitary precautions. Filth and putrefying hides fed the pestilence which exposure to the elements in an unaccustomed climate had engendered, and within a short time the task of burying the dead was more than the living could accomplish. After months of persistent effort the ill-fated expedition was abandoned, and the few survivors withdrew. Of eighteen hundred men sent to different posts along the river only three hundred returned. The naval contingent consisted of two hundred seamen. Eighty-seven of these were stricken with illness in a single night, and of the whole detachment only ten survived. Nelson, suffering with dys-

entry, and ordered to command the "Janus," returned to Greytown the day before Castillo surrendered, thus escaping the fate to which so many of his countrymen were doomed.

We had thought the "Hollenbeck," the river steamer which had brought us from Greytown, rather deficient in passenger accommodations, but she was a floating palace compared to the "Vero," the craft into which we were transferred the next day. This triumph of naval architecture, which plies upon the Rio San Juan above the Castillo rapids, is a small stern-wheel steamer of the western river type. The boilers are forward, where wood is piled upon the deck, and the engines are aft, leaving rather more than half the deck for freight. On the hurricane deck, which is exceeding light and has no railing, is a pilot house and a small deck house containing a galley and the captain's state-room. First class passengers are allowed the freedom of this deck and may move about to some extent without stepping into the river a dozen feet below; but they are exposed to the elements, their only shelter consisting of an insufficient tarpaulin propped over the dining table. We had for fellow passengers a Nicaraguan general,—of whom there are said to be six hundred,—two aids, a pretty girl with whom the General had scraped an acquaintance, and her old crone of a mother, who smoked

black cigars and discreetly looked the other way. On the deck below was a detachment of drunken soldiers, copper colored, barefooted rogues, clad in all sorts of costumes and armed with old Remington rifles. It rained much of the afternoon, and during the remainder of the time the sun shone with a fierce brilliancy which was very trying, but the trip was beautiful and interesting nevertheless. The jungle, though dense, was not so impenetrable as it had been further down stream, and the silence of the primeval forest was broken by the chattering of monkeys and the harsh, discordant cries of macaws and parrots, whose brilliant plumage flashed like sunlight from the sombre depths of the woods. While the light lasted we watched the shifting scene, and when darkness fell we sat about and sang some old familiar songs.

Shortly after nine o'clock we saw the lights of Fort San Carlos, and immediately afterwards came a cry of "Man overboard!" followed by a rush toward the stern. The engines stopped and the boat swung broadside to the current, while a dugout, cunningly shaped from a giant cedar log, was launched. Guided by two excited natives she disappeared in the encircling darkness, only to reappear after a few moments with a limp and dripping soldier lying in the bottom. He had rolled overboard

in his sleep and, suddenly aroused by his involuntary bath, had struck out bravely for shore; but his strength failed him, and he was upon the point of sinking when his rescuers seized him. As the river swarms with giant sharks, his escape seemed little short of miraculous.

While he was receiving the noisy congratulations of his friends the "Vero" resumed her course, and a few minutes afterwards we ran alongside the "Victoria," lying at the wharf below the town, and began transferring our effects to her. She is a fine iron boat, built in the States and plying on Lake Nicaragua. As the country was on the verge of insurrection, she was overrun with soldiers, who were quartered aboard, and were frequently offensive to passengers and crew alike. Some time before, they had killed the mate and imprisoned the captain for three months; and at that time the latter was closely watched and enjoyed only nominal liberty. The explanation is that the control of the boat meant the control of the lake, and therefore of the entire country; for the only other steamer, "El '93," is much inferior to the "Victoria" both in size and power.

We were awakened early Thursday morning by the sound of voices and the crowing of gamecocks, a number of which, the property of soldiers, were picketed about the deck.

After coffee and rolls we went ashore, wandering for a time through the quaint, dirty streets, and inspecting the two forts which are supposed to command the place. One, back from the lake, was only an old earthwork, in a poor state of preservation and with no provision for housing men. The only gun was a broken cast-iron piece, lying half buried in the ground, but the place was garrisoned with the usual barefooted soldiery. The second fort, which dominates the entrance to the lake, was provided with dilapidated barracks, and had one good Krupp gun, besides several out-of-date brass pieces. From the ramparts we gazed out over the water and along the marshy shore, which, sheltered from the trade-winds and fed by sediment from the Rio Frio, presents the strange spectacle of a delta plain growing from the outlet of a lake toward its head. In the foreground women, clad in garments both diaphanous and scanty, bathed, sublimely indifferent to the proximity of men totally unencumbered; and, breaking the placid surface of the water, the rusty boiler of a wrecked "Transit" steamer lay, a monument to past activity and enterprise.

Through the kindness of one of the officers we secured some shark hooks. These we used so successfully upon our return to the "Victoria" that we landed one monster after an

exciting struggle. He was promptly attacked by the natives, who cut off his tail with their machetes and rolled him back into the water, where, incapable of managing himself, he was speedily torn to pieces by his savage brethren. The river was alive with fish, particularly tarpon, five or six feet long, which we at first mistook for sharks. These fish, the *savalo-real* of the natives, are always very abundant, and a properly equipped angler might be sure of good sport anywhere between the outlet of the lake and Castillo.

Early Friday afternoon Lieutenant Hanus's and Mr. Brown's parties arrived upon the "Vero," and shortly afterwards we sailed upon the "Victoria" for San Jorge, the port of Rivas. It was a fine afternoon, and as we drew away from the land the scene was beautiful. The receding shore covered with green, the little town straggling up the hillside, and the soft, blue hills beyond were mirrored in the quiet waters of the lake, while ahead upon our port bow the cloud-topped peaks of Ometepe and Madera frowned upon us. These mountains are inactive volcanoes, rising to an altitude of about five thousand feet, and their summits are almost constantly hidden in clouds. As the afternoon wore on, we passed groups of low, fertile islands, densely overgrown with bushes and trees, and of all sizes, from small

spots of green to tracts many acres in extent. In the evening the wind sprang up and ruffled the surface of the lake, which shone like silver in the moonlight, and we sat about in scanty costume, and spun yarns until it was time to unroll our bedding and hunt the coolest places for our cots.

The next morning we were up at dawn, and found ourselves headed toward shore with the two great volcanic peaks looming up alongside. By the time we had had our bread and coffee, we were moored to the San Jorge pier, and in half an hour we had landed all our freight.

I met Mr. F. H. Davis, manager of the tramway, upon the pier, and went with him to Rivas; there I arranged to quarter my party at the house of Mrs. Runnels, while we were breaking out our outfit and getting ready for the field. The building was a one-storied whitewashed structure, with high bare rooms opening upon courtyards bright with flowers, and communicating with the street only by large wooden doors with small iron gratings. The roof was covered with the semi-cylindrical red tiles so common in that country, and around the courtyards were broad, brick-paved verandas, upon which the wide inner doors of the house opened.

By twelve o'clock the rest of the party had arrived, and we breakfasted in the court, or

patio, amid sunshine and flowers. Beef in various forms, eggs, chicken, rice, plantains, *frijoles*, *tortillas*, wheat bread, alligator pears, and *nisperos* followed in rapid succession, until, by the time we had disposed of our black coffee (nectar for the gods!) and blacker native cigars, we were in a state of blissful contentment; but from this we were rudely awakened by a sudden recollection of the necessity of getting our freight from San Jorge to Rivas. It was a *fiesta*, or holiday, and the natives, never prone to labor when a valid excuse for idleness exists, professed great surprise that we should expect them to imperil their immortal souls by working upon a holy day. But money will accomplish wonders; finally a man was found who, for an exorbitant sum, agreed to assist us. Unfortunately his oxen were conscientiously opposed to desecrating the day, and for a long time refused to be caught; but as we were upon the point of giving up in despair, they were corralled, and by dark our belongings were safely stowed beneath Mrs. Runnels's hospitable roof. In the evening Mr. Davis took us *en masse* to call upon Dr. Cole, an American gentleman who has lived many years in Rivas, and we afterwards wandered about the moonlit streets until doors were closed, lights extinguished, and the town was plunged in sleep.

The next day was Sunday, and we devoted

the morning to sight-seeing. Rivas is a town of about eight thousand inhabitants, situated three miles from the lake and a hundred feet above it. The streets are partially macadamized, the sidewalks high and narrow, and the houses one-storied adobe structures, built around *patios*, and usually without windows. *Zopilotes*, or buzzards, perch in sombre rows upon the red-tiled roofs, secure in the protection of a law which recognizes their utility as scavengers and permits them to perform their revolting functions unmolested. A *plaza* of some extent is overlooked by dingy barracks and a large parochial church with a clock. It is said that this clock, originally a fine one, was once cleaned by a local genius, who, when replacing the parts, omitted three wheels which seemed to him unnecessary. I cannot vouch for the truth of this story, but the erratic actions of the clock when I knew it seemed to indicate some internal disorder.

The country immediately about the town is of surpassing beauty. The roads are bordered by hedges of large mango trees inclosing gardens, broad pastures (*potreros*) and coffee and cacao plantations. Tall cocoanut palms nod against the clear blue sky, and from the neighboring hills are views across green fields and fertile valleys, with the sparkling lake and cloud-capped Ometepe in the distance.

Rivas is connected with San Jorge and the lake by a tramway, over which a wheezy little locomotive draws two broken-backed street cars on steamer days, or when the amount of traffic demands it. On other occasions one of the cars is, or was, operated by means of a pair of mules, a Jamaica negro, a thick stick, and much profanity.

I must admit that the people interested me more than the town, and Sunday was a good day upon which to observe them. Women were vastly in the majority, perhaps because the government was recruiting in anticipation of a revolution, and did not always stop to consult the inclinations of promising subjects. Be that as it may, we saw very few men, and most of them wore the red hatband which marked the soldier. But there were women galore—barefooted, black-eyed, brown-armed, olive-cheeked women with bright *rebozos* thrown across their shoulders, and an occasional well-dressed woman of the higher class, whose black lace mantilla made her white face look pallid beside the faces of her less aristocratic sisters.

In the afternoon I rode along the lake shore to the mouth of the Rio Las Lajas, where the canal line begins. Mr. Davis, who was one of my companions, knew the country very well, and proved an excellent guide. He took us down through green lanes bordered with giant



A NATIVE BELLE.



cactus hedges and between little red-tiled cottages to the beach, where the waves were breaking into spray, and cloud-capped Ometepe loomed above us. With a stiff breeze at our backs we rode southward, our horses sometimes splashing through the water and sometimes threading their way through tortuous, log-encumbered, shady paths, which parallel the shore. At the mouth of the Lajas we dismounted to look about a little, and then struck inland, stopping a few minutes at a little cane cottage where pigs, chickens, and naked children struggled for possession of the earthen floor. Circuitous bridle paths, deeply worn between high banks, led us through a beautiful expanse of wooded country with little to suggest the tropics, save occasional clumps of cactus eight or ten feet high, or straggling representatives of the palm family. We reached Rivas just in time for dinner, and found the rest of the men returning from a cockfight, with which they had been beguiling the tedium of a Sunday afternoon.

I had engaged an old native, named Nicanor Ortega, as *capataz* of laborers, and instructed him to employ twenty men. In the evening he reported that this had been done and that all was in readiness for a start upon the morrow.

CHAPTER VII

NARRATIVE—SAN PABLO AND ESPINAL

EARLY Monday morning two creaking *carretas* drew up at the door and were loaded with camp equipage, which I put in charge of the transitman and sent to the site I had selected for our camp. Several Americans and the entire force of laborers accompanied the caravan, which jogged slowly away in a cloud of dust, the squeak of wheels remaining audible long after the cries of the drivers were lost in the distance. These *carretas* are clumsy two-wheeled carts of native manufacture, drawn by oxen, or, more frequently, by bulls. The wheels are solid blocks of wood, frequently sections of tree trunks, and the superstructure is a clumsy rack with a long and heavy tongue. The typical example contains no iron, but of late years it has been customary to protect the wheels with tires consisting of broad straps of iron bent to fit successive segments of the wheels and nailed on. Grease is used sparingly, and the squeak of wheels can frequently be heard at a marvellous distance. Several pairs of

oxen are commonly used; they are yoked to the conveyance by means of heavy timbers lashed in front of their horns with raw-hide thongs.

Early in the afternoon we loaded a third *carreta* with instruments and personal luggage, and started for camp. It was a hot but pleasant day. For the first part of the way we jolted along through shady lanes lined with cactus hedges, past red-tiled *casas* through whose flimsy walls one could see pigs and people living in amicable intimacy; but after a little we turned into less frequented paths, breaking our way through the rank tropical undergrowth or grinding heavily along in the ruts of some disused trail. With the bright sunlight sifting through the foliage overhead and a breeze blowing steadily from the lake, our trip was far from unpleasant. Arrived at San Pablo, some six or seven miles from Rivas, we found two tarpaulins, stretched tent fashion over frames of poles; before dark, canvas cots were slung and we were comfortably settled in our new quarters.

We were camped upon a gentle rise near the bank of the Rio Las Lajas, a little stream a hundred feet or more in width, which at that season was merely a deep lagoon winding between densely wooded banks, whose giant trees nearly met overhead. Iguanas rustled

through the foliage, monkeys swung from limb to limb, and occasionally a great turtle, his back just breaking the black surface of the water, floated lazily by in a path of sunlight. Above us on the hillside was the little house from which the place takes its name—a rude affair with no walls worth mentioning, and a red tiled roof. Just across the river was an abandoned banana plantation, and near us was a field of sugar-cane; but except for these the land seemed uncultivated. Behind the tents was a cactus hedge six or seven feet high, and a few large trees afforded welcome shade. From the bank of the stream jutted a ledge of rock whence one could plunge into deep, cool water, although occasional glimpses of sharks and alligators made us a little cautious about indulging in that refreshing pastime.

It soon developed that our camp ground had been unfortunately chosen, since the inclosure which contained our tents had recently served as a cattle yard, and was infested with ticks, fleas, and red-bugs. The ticks were perhaps the most troublesome. Countless in number and of microscopic proportions, they thronged on kerosene, revelled in camphorated alcohol, and assimilated tobacco juice with surprising readiness. Only by dabbing the body with a lump of soft wax could they be removed, and every head which parted company



STREET IN A NATIVE TOWN.

with its body and remained beneath the skin produced a festering sore. Hardly better were the red-bugs, while the fleas did their full share toward making life insupportable.

Our survey took us through a tangle of vegetation, which necessitated constant cutting, and made progress slow and laborious. It was sometimes impossible to work in the afternoon, when everything was dry, because of "*pica-pica*," a vine bearing a brown pod which sheds a fine down almost unendurable. It attacked face and hands, and even penetrated our clothing, burning like fire and producing an almost uncontrollable desire to scratch, than which nothing could be more injurious. Then, too, the wasps, of which there were millions, delayed the work seriously, as many nests had to be destroyed each day; and ants, infinite in variety and number, aided and abetted the wasps to the best of their ability. We were not troubled by snakes, although we saw a good many and killed one large rattler, but I must confess to having been a little startled one day when a big one dropped into the canoe at my feet. They have a way of climbing trees there, which is rather disconcerting to strangers. But our life was upon the whole a happy and healthful one, with days in the tangled jungle and nights under flapping canvas; days of sweat and toil,

and peaceful nights when the glorious southern moon looked down upon us, and the lake winds, freighted with odors of the forest and the freshness of the sea, whispered in our ears.

While at San Pablo I became conversant with the qualities of native saddles, articles of equipment which I cannot conscientiously recommend as possessing any good points whatsoever. Formed of wooden blocks, almost semi-cylindrical in section, and as broad in front as behind, covered with raw-hide and provided with diminutive stirrups designed to accommodate the great-toes of barefooted riders, it is difficult to conceive of anything more uncomfortable or less calculated to assist an inexperienced rider in retaining his seat. I distinctly remember my first ride along the picket line on one of these devices of the Evil One. While I was crossing a deep gully the raw-hide girth slipped, and in spite of my efforts my horse bounded up the farther bank, saddle and rider sliding gracefully off over his rump. I fell upon a pile of brush ironically called *consuelo*, covered with long, sharp thorns and inhabited by small red ants, and before I could extricate myself I was stung in a thousand places. I walked back to camp carrying the saddle, and my subsequent remarks to the man who had officiated as hostler were unfit for publication.

An important member of our party was Alfredo Castillo, a boy thirteen or fourteen years of age, who joined us of his own volition and refused to leave. As we were moving from Rivas he accosted us and inquired whether we wished to hire a boy. Upon receiving a reply in the negative he calmly relieved Mr. Powell of his rifle and trudged along with us, no amount of persuasion sufficing to relieve us of his presence. At supper time he appeared in the mess tent, waited upon table, washed the dishes afterwards, prepared our beds, and vanished, only to reappear in the morning, energetic, capable, and absolutely impervious to sarcasm. In the course of two or three days he had become indispensable to us, and we put his name upon the payroll, much to his satisfaction. He was a bright little fellow, whose mournful black eyes greatly belied his disposition, and few were the days when no amusement was afforded by his mischievous pranks and droll sayings. His encounter with a pig, who, wandering around in the darkness, nearly ran over the sleeping boy; his ignominious retreat, *au naturel*, to the friendly shelter of our tent; his mighty threats of vengeance, changing to shrill squeaks of alarm upon the unexpected reappearance of the offending quadruped; and his subsequent elaborate explanation, formed one of the most amusing incidents of our camp life.

About the middle of the month we received visits from the chief engineer and the disbursing officer, and it became necessary for me to go frequently to town upon business connected with the party. The road used by horsemen between San Pablo and Rivas passes through a comparatively poor part of the country, almost uninhabited and densely timbered. The trail, for it is little else, is difficult to follow, because the frequent detours made by horsemen and *carretas* in the rainy season, to avoid bad places, have resulted in the formation of a multitude of paths so interlaced as to constitute a veritable labyrinth. During the month which we passed at San Pablo I never succeeded in following the same path twice, and upon one occasion I went so far astray that I barely reached camp before dark. The country traversed was particularly pretty at that season, several varieties of flowering trees being in full bloom and forming pyramids of brilliant pink and yellow, which contrasted finely with the all-encircling background of green. Tangled thickets and forest glades alternated with sun-backed llanos besprinkled with calabash trees (*Crescentia alata*), from the fruit of which native women carve drinking cups of quaint design.

In Rivas the military authorities were busy recruiting, and we frequently saw squads of sol-

diers returning from successful man-hunts with the unwilling victims tied together in their midst. Laborers from our party were sometimes seized, but a vigorous protest to the comandante always procured their release.

On the nineteenth of the month the commissioners, who had been to Managua to pay their respects to the President of the Republic, reached Rivas, accompanied by Mr. Menocal and a party of American engineers and contractors who were travelling through the canal belt. They came out to camp several times, and I took the commissioners over the line, while Mr. Menocal, chief engineer of the Canal Company, devoted himself principally to the contractors. The lower valley of the Rio Las Lajas is gently rolling, partially wooded country. It was easily inspected from a canoe on the river and in the course of a ride along a lane which we had cut; but in the valley of Guiscoyal Creek, about two miles from the lake, the growth of scrub was so dense that it was practically impossible to leave the picket line, which crossed and recrossed the little stream repeatedly. All went well for a time, and we rode along contentedly in single file, but at last a crossing was reached where steep cut banks and muddy creek bed brought us to an abrupt halt. We might have continued on foot, and returned for our horses instead of pressing on to

Rivas as had been planned; or we might have abandoned our inspection for the day, and attacked the line subsequently from the other end; but neither of these alternatives satisfied the commissioners, who courageously insisted upon turning into the jungle and attempting to force a passage around the bend of the creek which barred our progress. The result was as I had anticipated. Within half an hour we were hopelessly entangled in the brush, and could neither advance nor retreat, torn clothes and inflamed countenances bearing witness that thorns and "*pica-pica*" had done their best to guard the forest fastnesses. I finally dismounted and fought my way with hands and machete to the main picket line, upon which I emerged scratched, bleeding, and exhausted, after half an hour's hard work. Fortunately the transit party was near, and I soon organized a relief expedition of four *macheteros* who cut a way for us to the Rivas road, not far distant. I have always considered that trip a piece of good fortune, since it strongly impressed the participants with a sense of the difficulties under which we labored, and satisfactorily explained the long duration of our work.

On the fifth of February, our survey having reached a point nearly four miles from the lake, we moved to a place called Espinal, on the summit of the continental divide. The *car-*

retas which had been engaged arrived at day-break, and after a hurried breakfast we struck camp, loaded tents and equipment, and started off. Thirty-odd men, and several women who had come to pounce, vulture-like, upon anything left behind, followed like a small army behind the creaking ox-carts. We wound along through shady lanes, and finally emerged upon a great llano, or plain, baked in the sun until it had cracked in every direction, and dotted with calabash trees. Following this plain across the road from Rivas to San Juan del Sur, we plunged again into woods, and finally stopped in a small clearing containing a little *hacienda* and a well. Tents were soon erected, cots slung, and a reel of barbed wire to which we had unexpectedly fallen heirs was strung around the camp to keep cattle at a respectful distance. Although we were upon the summit of the divide, the ground was exceedingly flat. During the rainy season this ground becomes so saturated with water as to be almost impassable.

The long expected "revolution" materialized early in the month. Hostilities began at San Juan del Sur, twelve or fourteen miles from camp, on Sunday the sixth of February, and during the following night we could hear the sound of bugles from the "telegraph road" along which troops were being pushed to the front. Monday there was heavy cannonading

in the direction of San Juan, and conflicting reports were rife: some maintained that the insurgents had won the town, others that they were in full retreat. The next morning, returning from my usual ride along the picket line, I encountered a squad of horsemen riding through a woodland trail toward Rivas. They wore hatbands and ribbons of green, the color of the revolutionists, and upon perceiving me they covered me with revolvers, requesting me to stop. I like to be obliging, particularly when looking down the muzzles of a dozen cocked revolvers; so I stopped, explained who I was and what I was doing, and ended by expressing a wish that, if there was to be a fight, I might be permitted to witness it. This suggestion met with cordial approval, and we rode on amicably for a mile or two, when we met the main force of insurgents, some four or five hundred strong. I was presented to the general in command, who, after questioning me as to the number and disposition of the Government troops in Rivas, and the whereabouts of the "Victoria," and finding that I could or would give him very little information, invited me to ride with himself and staff and see them take the town. I readily assented, and was soon on friendly terms with several young aids educated in the States and speaking excellent English, one of whom laugh-

ingly urged me to accept his rifle and emulate my illustrious namesake the filibuster; but I explained that, owing to my official position, I must remain a mere spectator, and that the navy revolver which I carried was sufficient for purposes of self-defence.

We swept on like a triumphal procession, occasionally stopping at some little house for a drink of water or to drag from his hiding-place an unwilling recruit, until about noon, when in a shallow cut in the road near Rivas the enemy's picket fired upon us and a sharp engagement ensued. It was of brief duration, the picket falling back upon the town, closely followed by our men. Part of our force kept to the road, while the rest of us turned through a gap in a barbed-wire fence and charged up a steep hill in the southern part of the cemetery, which the Government had fortified. Finding that the garrison had fled, and that only a weak and ineffective fire was opened upon us from the neighborhood of the great stuccoed gate as we reached the crest, we advanced through an intervening valley, meeting with little resistance from the retiring enemy, and passed through the gate into the town, where the garrison made a stubborn stand, and fierce fighting began. I skulked along from tree to tree, the singing bullets showering twigs around me and knocking chunks of adobe from the house walls; but

after fifteen minutes or so, finding myself exposed to an awkward cross-fire and fearing that my horse would be killed, leaving me to face certain death in the event of the repulse of the insurgents, I made my way back to the gate, where I could tie my steed in a sheltered position, and from near which I could command a pretty good view of the town. The fighting was still fierce, but the Government forces were gradually driven back to the vicinity of the *cuartel*, or barracks. Numbers of wounded passed me on their way to the rear, some slightly hurt, some badly injured and helped along by friends. One fellow, shot directly through the body, passed me at a gallop. His face was pale and drawn, his eyes half closed, and he reeled in the saddle like a drunken man, but when he passed out of sight over the crest of a neighboring hill he was still spurring his jaded steed with grim determination. I have often wondered what became of him, but I fear that only the buzzards know.

About two o'clock the pangs of hunger assailed me, and I rode back to camp leaving the result of the battle still in doubt.

Reaching Rivas early the next morning I found the Government forces in full possession. The sudden arrival of the "Victoria" with reinforcements had enabled them to beat off the insurgents, who were in full retreat, no one

knew whither. A hospital which had been established was full of wounded; but the town had recovered its equanimity with wonderful promptitude, and no one would have supposed that, a few hours before, bullets had been flying through the quiet streets.

The commissioners had an interesting tale to tell. They were just sitting down to breakfast, when a volley of musketry announced the beginning of the fray, and almost instantly the house was filled to overflowing with women and children seeking the protection of our flag. The great doors were shut and barred, but one was soon opened again, that the impatient gentlemen might view the progress of the fight. A little Indian with the red hatband of the Government, one of a detachment of skirmishers, stood directly outside, loading and firing with great speed and precision. A clatter of hoofs in the next street and a small party of green-ribboned *cabaleros* dashed around the corner. Bang! went the Indian's rifle, and a bit of adobe flew from a house wall four inches from the leader's head. Crack! went his revolver in reply, but he turned and galloped off, nevertheless, followed by his men.

I went and called on Dr. Cole, who grinned and showed me a dozen holes in his flag, fifteen feet above the street. "That's the way they shoot," he said.

As I left town they were burying the dead in the cemetery where we had fought the day before. Some of the poor "volunteers" whom I had seen tied together like sheep and dragged to the barracks between files of soldiers, had found bloody graves. This method of obtaining soldiers, by the way, does not seem to strike Nicaraguans as peculiar; and when the story is told of the officer who answered the President's telegram "Send more volunteers," with a message, "Send more rope," they cannot understand why foreigners laugh.

I believe that Nicaraguan troops are generally underrated by travellers who have never seen them in action. Brave, of great endurance, capable of living on next to nothing, they have in them the making of exceptionally fine light infantry. While usually lacking in discipline, they do not hesitate to perform what they understand to be their duty, as I found on more than one occasion, when, relying upon my nationality and my ignorance of Spanish, I undertook to pass outposts without the necessary countersign. A disregarded challenge was always followed by an ominous clicking of locks, and a glance into the muzzles of a number of levelled rifles invariably convinced me of the wisdom of complying with the requirements of military law.

CHAPTER VIII

NARRATIVE — PARAISO AND EL PAVON

THE commissioners were much delayed in their journey toward Greytown, as the Government had seized the "Victoria" to transport troops and munitions of war, and they could not cross the lake; but finally the last rumble of insurrection died away, and their interrupted travels were resumed. Shortly afterwards, having increased our party by the addition of the Davis brothers of Rivas, A. L. Scott, a coffee planter of Matagalpa, and a number of natives, we moved to a place called *Paraiso* (Paradise), in the gorge of the Rio Grande. The first part of our way lay over llanos, but we soon plunged into the forest, travelling in a direction parallel to the canal line and making an occasional detour around the head of some rugged gully or muddy creek. A band of *macheteros* preceded the *carretas*, cutting a way through the tangled underbrush, and frequently stopping to readjust the loads after wild plunges through deep ravines or over fallen trees, while I brought up the rear on horseback. Parrots

screamed in the branches, monkeys chattered and grimaced, and herds of half-wild cattle stampeded at our approach. After many hours of labor we reached our destination and, with speed born of experience, pitched our tents and established ourselves comfortably.

We were camped in a dense virgin forest on the banks of the Rio Grande, which at that point winds circuitously through a sort of canon amidst precipitous hills. The stream, nearly dry at that season, bounded the camp on three sides, and across it were steep, rocky bluffs crowned with gnarled madroños and an impenetrable thicket of underbrush. The country was the roughest which we had seen, and, but for the hard, gravelly bed of the river, which was crossed and recrossed by the line, we should have found it difficult to get about. Rivas was a thing of the past, as far as we were concerned, and neighbors were not numerous, but we had a large party, thirty-seven men, and therefore did not feel at all isolated. Our camp was by far the most attractive which we had had. We cleared out the underbrush, leaving the large trees for shade, and the forest around us, always rustling in the ever present breath of the trades, shut us in like a green wall. A tiny thread of water, winding along the stony bed of the river's gorge and connecting clear, deep pools where one might

A TRANSIT PARTY.



bathe at will, furnished an abundant supply of drinking water, and to it came all the beasts of the forest every night. Pumas crept with stealthy steps to old familiar pools, and deer, which through the heat of the day had lain concealed in shady brakes, ventured forth as daylight died, to drink and browse till dawn. All through the night, while the moon sailed by above us, we heard strange noises from the sombre depths of the woods, and doubtless wild eyes glared at us, as their owners wondered what strange beings had invaded the privacy of their domains. It was not until the Southern Cross had set and the cook's fire had begun to crackle and throw dancing shadows on the wall of green around us that the forest world was still; and then the eastern sky brightened to a pallid gray, and we tumbled out to breakfast and another day's hard work. And hard work it was, with various annoyances in the shape of heat, insects, and an all-encircling plague of "*pica-pica*." *Garrapatas*, or minute ticks, swarmed everywhere, dropping or blowing from the foliage upon their helpless prey, while myriads of wasps and ants conducted their attacks with a method and precision worthy of an army. In the middle of the day the sun was extremely hot, but as most of the country was heavily timbered and a breeze blew constantly across the lake

from the Caribbean Sea, we got along very well.

Large numbers of monkeys inhabited the adjacent forests, great black fellows called *congos* by the natives, white-faced little fellows of evident Hibernian extraction, and cinnamon monkeys in abundance. Their howling was very troublesome at night, for one small *mico* makes a noise resembling in tone and volume the barking of a large Newfoundland dog. I can imagine that a night in those woods, to one unaccustomed to it and ignorant of the origin of the various sounds, would be a hair-raising experience. Near our tents grew a clump of trees bearing small red berries, of which the monkeys were very fond; but alas! had they been brandied cherries, intoxication could not have followed their use more surely and rapidly. No doubt to a philanthropic evolutionist a campful of drunken monkeys would be a sorrowful and prophetic spectacle, but to us it was supremely ludicrous and I am sure we shall never forget some of the absurd antics which we witnessed.

The females carry their young on their backs or clinging about their necks, and we obtained several little fellows by shooting the mothers. The method was not so cruel as it seems, a liberal use of the rifle being necessary to keep them out of camp. The youngsters

made amusing pets, but were extremely mischievous and invariably met with tragic ends.

By the time we reached Paraiso the less desirable members of our native force had been dispensed with, leaving an efficient set of men, most of whom remained with us until the end of the work. Simple, ignorant, credulous, friendly, there were many of whom I shall always cherish the pleasantest recollections. Old Nicanor, short, bow-legged, his swarthy face protected by a grizzled beard, was patriarch and *capataz* in one. Kind-hearted, diplomatic, a fount of sage advice and backwoods wisdom, he ruled his motley crew judiciously and well. Here's to thee, Nicanor; may thy shadow never grow less! An ambiguous wish, perhaps, where twice a year the sun is vertical at noon.

And Mariano Tenorio, has his story ever ended? Begun at San Pablo, it dragged its weary length through each successive camp, and being guiltless of plot and interspersed with philosophical reflections and commentaries, there was no reason why it should not last as long as its narrator.

Jesus Acebedo, swarthy, melancholy, picturesque brigand, never so friendly and elaborately civil as when the fumes of *aguardiente* were wafted in thy wake; Emilo, Cruz, Virgilio, sage,

courtier, and buffoon, how fares the world with you?

On the twenty-third of March we moved to El Pavon, where the Rio Grande enters the Tola Basin. Leaving Paraiso we traversed rolling hills, crossed a broad and fertile plain at the mouth of the Guachipilin creek, amid fields of indigo and groves of plantain trees, and plunged into the rocky, heavily timbered valley of the Rio Grande, bounded by ranges of high hills about a quarter of a mile apart and seamed and scarred by waterworn gullies. A road passable for *carretas* led to within half a mile of the camp site, and our *macheteros* soon cut a passage for the remaining distance. The location of our new home was an ideal one. A huge tree with long, straight trunk and spreading branches arose in the midst of a clearing large enough to contain our tents, giving a cathedral-like effect to the camp; and on two sides was the deep-cut, gravelly river-bed, along which flowed a small but all-sufficient stream connecting quiet pools. Around us rustled the familiar forest, teeming with savage denizens. Deer, peccaries, pumas, sloths, armadillos, monkeys, iguanas, *pisotes* (*Nasua fusca*, a small animal resembling the raccoon), and *guatuzas*, or agoutis, tempted the hunter's skill, but tangled thickets and clinging vines were almost insuperable obstacles to any but



A BUTTRESSED GIANT OF THE FOREST.

the natives. These vines were remarkably tenacious of life, and when cut off as high as a man could reach, sent out shoots which in two or three weeks reached to the ground and took root.

Above us was the rough country which we had traversed ; below, the broad alluvial plain of the Tola Basin stretched, flat and thickly wooded, to the La Flor hills three miles away, through which the river has cut a gap enabling it to flow onward to the blue Pacific. Herds of cattle roamed the trackless woods, deer bounded through the thickets, and from peaks of the encircling hills glints of silver to the westward marked the ever restless sea. In long rides along the gravelly river-bed or tangled cattle trails to the eastward, I passed little clearings and cottages where groups of half nude, sun-browned women stood knee-deep in water, washing clothes, gossiping and lazily puffing wreaths of blue smoke from *puros* of domestic make. Few men were to be seen, for the political sky was dark, and recruits were in demand, but occasionally our picket line struck little huts hidden in dense clumps of bushes, where peace-loving natives led the lives of hunted beasts rather than become unwilling candidates for military glory.

Near the beginning of the Tola Basin, about ten and a half miles from the lake, was a large

tree with a hole in it through which the old Canal Company's line had passed. Although we had been unable to verify our original course and had found no reliable monument along the way to which to tie, we passed through the same hole, thus checking both the previous work and our own to our satisfaction.

Large numbers of beef cattle are raised in the canal belt, some for home consumption, and many for export to Costa Rica, where a good market may always be found. Other products are corn, plantains, sugar, coffee, cacao, and indigo. Three crops of corn a year are frequently raised on the same ground, and plantains and sugar-cane thrive. Coffee does well if shaded, and cacao plantations are profitable, but require much care during the first few years. Indigo is little raised, as its culture and subsequent preparation require the utmost care, and modern aniline dyes have greatly lessened its value. The more common tropical fruits are produced in sufficient quantities, but little attention is paid to quality. Mangoes, oranges, lemons, limes, pineapples, alligator pears, and cocoanuts are the varieties most in use.

Near El Pavon the deadly coral snake was common,—we killed one in our tent,—and multitudes of scorpions kept us in a continual state of watchfulness, which however, did not

prevent several of us from being badly stung. But the strangest creature which we saw was the *araño de caballo*, or horse spider, a great hairy beast with body nearly as large as a girl's fist, and legs long in proportion. It attacks horses in the pasture, biting them just above the coronet and causing an inflammation which finally results in the loss of the victim's hoof, crippling him for about a year. We secured numerous fine specimens, which I tried to preserve in alcohol, but in getting them into a wide-mouthed pickle jar several of the legs, which are very insecurely attached to the body, invariably dropped off. Upon encountering one unexpectedly I struck at him with a stick, depriving him of two legs, but he made off with surprising agility upon the remaining ones, apparently none the worse for the loss he had sustained.

Another interesting but troublesome insect was the *nigua* or *chigoe*, with which we all had more or less experience. It is said to resemble a small flea, but I cannot speak from personal acquaintance, my observations being confined to the results of its operations. The female of the species buries herself in human flesh, usually between the toes, the warmth of which develops her eggs until she becomes a distended sac the size of a pea. Should the eggs hatch, a dangerous sore is the result, but the trouble

is usually noticed before it has reached an advanced stage and is easily remedied by carefully cutting out the sac without breaking it and anointing the wound with the natives' universal remedy, kerosene. I once broke a sac in removing it from my foot, but upon carefully scraping the wound and dressing it with anti-septic cotton no ill effects followed.

Near camp were several *matapalos*, remarkable growths half vine, half tree, which bear the same relation to the vegetable world that boa constrictors do to the animal kingdom. Growing around forest trees, they gradually inclose and kill them with their interlacing limbs, the dead and branching skeletons frequently standing long after the last signs of life are gone.

I think it was at El Pavon that we first found courage to eat iguanas. These animals, which abound throughout Nicaragua, are repulsive-looking lizards, sometimes attaining a length of five or six feet, with loose skins covered with scales, serrated crests along their backs and flabby pouches beneath their jaws. They live almost entirely in trees, subsisting on leaves, but take readily to the water and perhaps vary their vegetarianism with an occasional fish. Their flesh is excellent, far superior to chicken, and their eggs, which they lay in sand banks, are considered great delicacies by the natives.

CHAPTER IX

NARRATIVE — LA FLOR

ON the twenty-third day of April we moved to La Flor and camped on the bank of the Rio Grande below the site of the proposed dam. As usual, we were in the woods, and while we had not the great green amphitheatre which had made El Pavon so pleasant, we were well situated in a clearing just large enough to hold us comfortably, with a fine view of the river — a small stream at that season — and plenty of shade. There were eight or ten houses within a radius of half a mile, and we saw more of the natives than before. Although rather below our standard of height they were extremely well formed, particularly the women, whose graceful figures, erect carriage, clear, dark complexions and liquid black eyes made them far from unattractive. Both men and women are indolent by nature, but showed great physical endurance upon occasion, walking surprising distances barefooted or shod only with sandals of primitive design. The women throughout the country seemed more industrious than the men, cutting wood, cook-

ing, or standing in the river hours at a time, with strips of cloth twisted around their loins, washing clothes; while their lords and masters, after a few hours' work in the early morning, lay about in the shade or rode to visit their neighbors. Sobriety was an unappreciated virtue among them and their morals were not of the best, but they were a simple, childlike race, who perhaps should not be blamed for lacking qualities which they had never been taught to value.

We saw many specimens of the *zumpopo*, or leaf-cutting ant (*Ecodoma*), a curious insect with which we first became acquainted at El Pavon. These ants select a bush or a limb of a tree and strip it of leaves, cutting them away piecemeal and carrying the fragments to their nests. Each ant selects a leaf and cuts off a piece by nipping a series of holes so near together that when her work is completed the fragment may easily be detached. During this process her head moves in the circumference of a circle of which her hind legs are the center. The piece once obtained, she carries it off, holding it erect with its plane parallel to the direction in which she is moving. These interesting creatures move in dense armies and resemble processions of minute sail boats bobbing along in a choppy sea. They soon wear a path six or eight inches wide which is easily distinguishable at a dis-



PRIMITIVE SAWMILL STILL IN USE.

tance of fifteen or twenty feet. They do not eat the leaves, but take them to their subterranean nests and use them as a compost upon which grows a species of minute white fungus which serves them as food. The nests are described by Mr. Belt as consisting of numerous rounded chambers, each as large as a man's head, connected by tunnelled passages, and three parts filled with "a speckled brown, flocculent, spongy-looking mass of a light and loosely connected substance" composed of minutely subdivided leaves tied together by white fungus. The subterranean chambers communicate with the outer world by numerous holes which, as they are alternately opened and closed by the inhabitants, are presumably for purposes of ventilation and to permit the maintenance of an equable temperature. These mushroom-eating ants were among the most remarkable insects which I observed in Nicaragua.

Other interesting but more troublesome neighbors were the wood-eating white ants, voracious animals which live in the ground or in large mud nests built in trees, and under ordinary circumstances never see the light of day. They build mud tunnels wherever they go, and live and work inside them. A thread of mud along any article means danger, and the chances are that if it be broken, thousands of ants will swarm forth, and the object beneath

will be found badly eaten. They do not confine themselves to wood, but attack nearly everything, human beings included. The first night which we spent at La Flor, I unwittingly pitched my cot directly over one of their tunnels, which I broke in the process. When they resumed their interrupted march, they preferred to do so by way of my bed,—up one leg, diagonally across and down the other. I did not sleep much that night, and it took two men all the next day to induce them to change their route.

About half past ten on the morning of the 29th of April, Mr. Harden and I were sitting in the office tent computing a traverse, when the improvised table began to rattle, the tent to shake, and the monkeys in the neighboring trees to howl lugubriously. Cook and camp boy fell upon their knees, crossing themselves and muttering prayers, the trees swayed violently to and fro, dead branches came crashing to the ground, and all was discord in the forest world. A moment and it had passed. The monkeys stopped their howling, prayers ceased abruptly, and the day's occupations were resumed. *Un temblor*, that was all.

Until the rainy season began, there were dances every moonlight night at the house of an old woman who, for a trifling consideration, dispensed *aguardiente* of astounding strength. The sight was always extremely

picturesque. A little thatched hut with its walls of poles, through which the feeble light of a single dip flickered uncertainly; the forest in the background, black and grim against a flood of moonlight; the crowd of merry-makers, black-eyed country girls, and white-clad *mozos* (peasants), their cigarette tips glowing like fireflies as they danced strange native dances to the half barbaric music of *mirimba* and guitar, all combined to produce a scene of strange interest and beauty. Spurs jingled on naked feet, *machetes* swung and clashed, and as the fumes of *aguardiente* perfumed the cool night air the dancers' pace increased. In their last stages these affairs were not always pleasant spectacles, but we usually left early, mindful of the morrow.

The *mirimba* is an instrument resembling a zylophone, and is composed of two long pieces of wood spanned by little hard-wood slabs of varying length, with empty gourds beneath them. The slabs are struck with rubber-tipped sticks, emitting clear and musical tones. Soft bits of wax covering holes in the gourds are pressed in or out to regulate the pitch.

Late each afternoon camp was invaded by native girls selling *cajetas* and *dulces* (cakes and sweetmeats), bare-armed, bare-legged lasses with skirts kilted to their knees, and great, flat wooden dishes hewn from sections of tree

trunks, upon their heads. Their wares were fearfully and wonderfully made—corn meal, chocolate, sugar, honey, and fruits being common ingredients—but they met with ready sale, particularly if the vendors were personally attractive and quick at understanding disjointed and unidiomatic Spanish.

One night we went to a *fiesta* celebrated at a little house a quarter of a mile from camp and attended by everybody in the neighborhood. As the river was somewhat high, we engaged a *mozo* whom we met near the ford, to carry us over on his back, each of us giving him a small sum in payment; and it was hard to know whether to laugh or to feel embarrassed when, upon reaching the scene of the festivities, he came forward and courteously welcomed us to his home. Beneath a little thatched shed was an altar supporting a plaster image of the Saint whose day it was, surrounded by bright-colored cloths and ribbons, and lighted by several home-made candles. After a long period of silent meditation, an old white-haired man, famous for his devoutness and retentive memory, stepped forward and delivered a long exhortation, clothed in language which was quite unintelligible to us, but which evidently made a deep impression upon the natives. At the close of his harangue, his hearers stepped forward, one at a time, bowed

low before the image, and retired, after which the candles were extinguished, a *mirimba* brought forth, and the evening ended with music and dancing.

At these social gatherings of the natives, various forms of *frescos*, or cool drinks, are served. *Guarapo*, or fermented cane juice, and *tiste*—made of parched corn, chocolate, sugar and water—are common and delicious. The latter is very nourishing, and many natives never travel without a little bag of the dry ingredients, which, mingled with water from the nearest stream, furnish a refreshing substitute for lunch.

Early in May the strong, cool breeze from the Caribbean Sea failed us, and both days and nights became extremely hot, but on the evening of the seventeenth we had a violent shower, and on the twenty-first the heavy downfall of the tropical winter burst upon us. It rained all night with great violence, and in the morning the floor of the tent was a mass of mud and water, through which the men, in shrunken duck trousers and clammy flannel shirts, with bare feet thrust into soggy slippers, picked their way, while innumerable little rivulets from various leaks in the tarpaulin besprinkled all impartially. I awoke before daylight, to find myself lying in a pool of water, which was fed by several minute leaks above me, and nearly

every one else fared likewise, Harden and Powell being the only ones who kept reasonably dry. Could we have dried our bedding, it would not have mattered, but it rained steadily for a week, after which the sun fought its way through the clouds, and we had good weather, with two or three showers a day and rain every night. It proved practicable to keep dry by suspending rubber blankets over our beds, but we came near having no tent to protect us, for early one morning, just before we went to work, a great dead limb from an overhanging tree, which had been concealed by vines, came crashing down upon us, wrecking the tarpaulin and nearly killing several of us. I at once sent some men to hunt rubber trees, and with the aid of old trousers, a sail needle, and plenty of rubber, we soon repaired damages to a great extent.

After the first rain the Rio Grande became a turbid, roaring torrent, rising with astonishing rapidity, eroding its banks and whirling uprooted trees and tangled débris to the sea. The dripping woods, parched by six months of sun, burst into life anew. Rank weeds sprang from lately barren soil, and insect life increased an hundredfold. Mosquitoes, gnats, and flies invaded our camp in swarms, but a marked decrease in the number of ticks somewhat reconciled us to this new infliction.

In June we received a visit from Mr. Wheeler, the chief engineer, who was desirous of studying the country between the lake and Brito, and with whom I rode over the entire line. After a day spent in the lower Rio Grande valley, examining into harbor possibilities at Brito and obtaining a general idea of the country, we decided to go to San Juan del Sur—which we had not seen—before our progress eastward along the line, and probable bad weather, should make the project more difficult of accomplishment. Accordingly we left camp next morning immediately after breakfast, taking old Nicanor as guide. Fording the river and traversing a broad stretch of *potrero*, dotted with cattle and the blackened stumps of giant trees, we crossed the stream again at the Brito *hacienda*, and struck into a woodland trail leading gradually upwards toward the crest of the row of hills bounding the river's silted estuary to the eastward. As we advanced the path grew rougher and steeper, but our horses clambered along until we emerged upon a lofty summit, whence we could see out over the valley to the purple hills beyond, while to the southward stretched a long expanse of coast, beaches of dazzling sand alternating with rocky, jutting headlands, cut by the elements into grotesque forms and licked by a row of seething breakers. Plunging down on the seaward side, over

a trail so steep that Mr. Wheeler, who is a large and heavy man and was riding a little weak-kneed pony about the size of a donkey, was obliged to walk, we finally reached a rolling, wooded plain. The path wound along through thickets of cane and under giant trees knit together by masses of clinging vines, occasionally branching in so many directions that Nicanor, good woodsman as he was, led us astray and had to retrace his way. Noon found us wandering amidst a labyrinth of paths and dry watercourses, and we stopped to rest our weary steeds and to refresh ourselves. In the hurry of departure I had commissioned our *capataz* to provide a suitable lunch, which he had done to his own satisfaction by wrapping three hard-boiled eggs and somehardtack in his neckerchief and putting them in his pocket. One of the eggs proved to contain a well-developed chicken, thehardtack was full of weevils, and the only water we could procure came from a stagnant roadside pool replete with wriggling life. Nevertheless we allayed the pangs of hunger, tightened our horses' girths, pushed on, and emerged from the woods upon the sea beach early in the afternoon. Trotting briskly along the hard, wet sand for several miles, occasionally clambering over a jutting, rocky point, we turned inland again, climbed a steep and muddy hill, and came out upon the "Transit"

road near the town. Winding along the edge of a precipitous gorge, we descended into a fertile valley, followed the bank of a pretty stream whence laughing *lavanderas* (washerwomen) called "adios" to us, and entered the town.

San Juan del Sur is beautifully situated on a small indentation of the coast bounded by precipitous headlands and lined with a shelving beach of white sand. The cable station, a handsome and substantial building, and numerous wooden houses, with galvanized, corrugated iron roofs, mingle with native cabins, and give an odd, mongrel appearance to the place. The only hotel is a small and squalid structure built around three sides of a square and containing unfurnished bedrooms of rough plank. The windows overlook stagnant pools of filth, pigs grunt and root beneath the dining table, and ducks and chickens wander at will about the premises. A high and precipitous promontory bounding the harbor on the south is crowned by a small, ruined fort and wooden beacon, to which I climbed by a winding woodland path. Finding the garrison fast asleep on his back, his face turned to the blazing afternoon sun and an empty *aguardiente* bottle by his side, I appropriated and hid his rifle as a precautionary measure before sitting down to regain my breath and enjoy the beautiful panorama spread out before me. To the westward,

gulls were wheeling against the azure sky; below, the restless ocean churned itself to foam against the rocky shore, or dashed in spumy breakers on the shining beach; and from the northeastward a little stream wound like a thread of silver through a green alluvial plain bounded by rocky hills crowned with a forest growth, to mingle with the ocean far beneath. Regretfully I left the breezy headland and retraced my steps through shady paths to the little village nestling at its foot.

The few remaining hours of the afternoon proved sufficient for our sight-seeing, and early the next morning we started upon our return to camp. For the first few miles we followed the old Vanderbilt Transit Road, which runs from San Juan to Virgin Bay, and which, although neglected for many years past, is still in excellent condition; then, turning to the left, we took the "telegraph road," which crosses a broad stretch of llano toward Rivas. Except for occasional mud holes, where our horses floundered belly-deep, it was in fairly good condition; but two months later, in the same place, my horse and I came near perishing together, literally drowned in a sea of mud. After a very hard day's ride we reached camp, with an accurate idea of tropical travel in the rainy season and a keen appreciation of the charms of a canvas cot.

The following morning we started along the line toward the lake, expecting to reach Bull's hydrographic camp near the mouth of the Rio Las Lajas early in the afternoon, and to spend the night in Rivas. The horses we had ridden to San Juan were taking a well earned rest, and with fresh mounts we jogged along past El Pavon and into the bed of the Rio Grande near Paraiso. Luckily there had been comparatively little rain for some days, and the river—which falls as rapidly as it rises—was so low that we could follow it to the point where the line leaves it and crosses the continental divide. There our troubles began. The broad expanse of llano which constitutes the summit had become a spongy bog, through which our horses struggled slowly and with great difficulty. It was sometimes necessary to dismount and wade knee-deep through mud, our steeds following with dejected heads, their hoofs sucking like plungers of defective pumps, as they dragged them from the sticky clay.

Beyond the telegraph road it was better country, and early in the afternoon we reached the shore, glad to sit down under Bull's hospitable canvas roof and let the lake winds fan our brows. Mr. Wheeler decided to remain there for the night, but I pressed on, despite Nicanor's groans, intending to return to camp by way of Rivas. Our horses were somewhat

spent, the roads were bad, and midway between Rivas and La Flor night overtook us. We were just entering upon a wild and rocky country where the trail, never easy to follow, wound among mountain torrents, rocky gullies, and tangled woods. Guiding our steeds as best we could and bending over our saddle-bows to avoid overhanging branches, we rode along until within two or three miles of camp, when, in the inky blackness, we completely lost our bearings and came to a halt. As we were debating what to do, a gleam of light in the distance caught my eye, and in answer to our hail the familiar voice of one of our own men came faintly to our ears. He had been to see a friend, and was returning to camp, lantern on arm, just in time to rescue us from an awkward situation. Following his dancing light we reached camp in safety, both horses nearly dead and old Nicancor's opinion of the foolish energy of *Americanos* greatly augmented.

As our stay at La Flor drew to a close, the men began to chafe under the monotony of camp life and to seek variety by spending their Sundays in Rivas whenever propitious weather and available horseflesh combined to make it possible. The hotel at which they put up was kept by an old Englishman called "Jimmy," who had been there since the bonanza days of the Vanderbilt Transit Company. It was a

one-storied, whitewashed building, undistinguishable from its neighbors, except for the sign which proclaimed it a public-house. The arriving *caballero* rode in by the front door, through the parlor and into the *patio*, which, as usual in Central American houses, served as dining-room. Here the steed remained until one of the numerous domestics found time to lead him into the kitchen and tie him in a far corner. Meanwhile the guest was shown to one of the great, brick-paved, square rooms containing three or four canvas cots covered with thin, white counterpanes and protected by mosquito nettings, an enormous hammock, a couple of chairs and a water monkey with glasses. There was no ceiling, and the roof consisted of roughly hewn timbers supporting poles covered with red tiles. The partitions extended only to the eaves, consequently convivial neighbors and the multitude of bats which infested the place sometimes made slumber difficult. The establishment was palatial, however, compared with that at San Juan del Sur, where I slept in a bare wooden stall filled with the odors of an adjacent filthy pool, and where the dusky handmaiden was obliged to drive a large sow and a litter of pigs from beneath the table before I could sit down to breakfast.

CHAPTER X

NARRATIVE—TOLA AND EL CARMEN

ON the twenty-seventh of June we finished our survey of the belt of country available for canal construction. From our initial point on the lake shore we had run for a mile and a third up the rolling, partially wooded valley of the Rio Las Lajas, left it near the mouth of Guiscoyol Creek to follow the course of that stream through tangled thickets to the flat llanos of the continental divide, crossed the summit at an elevation of a hundred and fifty-four feet above the sea, plunged into dense woods, and entered the rocky valley of the Rio Grande, which we followed through a deep ravine and a broad but rocky valley into the flat alluvial plain of the Tola Basin. Sweeping gradually to the left, we had crossed this wooded plain, emerging through the narrow gap in the La Flor hills cut by the busy river, and traversed broad, gently sloping *potreros* and matted woodland to the beach at Brito. In order to map the adjacent country we had run large numbers of auxiliary lines from the

main line; thus our progress was slow, particularly near Brito headland, where the river valley is a silted estuary extensively inundated at high tide and partially overgrown with a tangled mangrove forest.

The project of the Maritime Canal Company contemplated the conversion of the Tola Basin into an inland harbor four thousand acres in extent, by means of a dam in the La Flor hills, which should hold the water at the lake level, assumed to be one hundred and ten feet above the sea. In order to determine the boundaries of this proposed harbor it was necessary to run a line along the ranges of hills bounding the valley on the east and west; and to accomplish this we moved camp to a centrally located point about one and a fifth miles from the little town of Tola.

The river, swollen by heavy rains, prevented our passage until the last day of the month, but early that morning we crossed the La Flor ford and struck into the woods to the northward, followed by the usual caravan of *carretas* and barefooted *mozos*. The road used in the dry season proved absolutely impassable, nor was it of much service as a guide, for it branched at places into a dozen widely divergent trails, and was sometimes lost completely in rank, rapidly growing vegetation. Fortunately the forest consisted of giant trees com-

paratively free from vines and large underbrush ; and therefore, by winding along carefully we crashed through weeds and thickets with little cutting. About noon we reached our camp site upon the point of a promontory of high land projecting from the bounding hills to the westward, and overlooking the Rio Tola, a little stream of comparatively constant volume emptying into the Rio Grande. Although we had become skilful in pitching camp, each man understanding the essentials of comfort and knowing how to obtain them with the least expenditure of time and energy, the saturated condition of the forest rendered the preparation of a suitable abiding place a matter of much difficulty. Trees and brush which had been cut away to make room for the tents, refused to burn, and were piled in heaps, affording shelter to hundreds of scorpions and centipedes, while the clearing thus painfully obtained was soon trodden into a mass of mud which never dried even under the sheltering tarpaulins. The tents were ditched and drained, but the showers which occurred with discouraging frequency were so violent as to drive a mist of rain through the oiled canvas, and to cause numerous leaks to play like fountains upon the ground beneath. Keeping dry in the field was out of the question, and we had long ago become accustomed to several soakings a day.

The instruments, although protected by rubber bags, clouded up so as to be unfit for use, and much time was lost in taking them to pieces and carefully drying tubes and lenses; while the heavy condition of the country and the long walks necessary to reach some parts of the work told upon the men, and made rapid progress impossible.

But on rare days of sunshine our surroundings were not unattractive. A narrow trail leading to the Tola road wound over the crest of the high spur on whose point we were encamped, and from its highest spot the eye might range at will over mile upon mile of gently undulating forest bounded by unbroken ranges of rugged hills rising abruptly from the plain and bathed in brilliant sunshine or darkened by the swiftly passing shadow of a cloud. Small hillocks, rising like islands in a sea of green, were scattered here and there, emphasizing the general uniformity of level due partly to the alluvial origin of the land, partly to the equalizing effect of the forest; for the trees grow higher in hollows than on ridges. Each day the view was different, though the same. Perhaps the valley lay like a mirage, no tree top stirring in the heavy air which trembled with the heat. Or else a storm arose; great banks of vapor rolled over the encircling hills, filling the valley with a sea of mist; from darkening

clouds the lightning flashed and thunder roared; the giants of the forest groaned and creaked before the rising blast, which bent young saplings almost to the earth and stripped them of their leaves; and then the rain began, the stinging drops flying like missiles from an unseen sling to rattle in the foliage overhead or to rebound in spray from the unsheltered surface of the trail. Thus Nature's varying moods became familiar to us and, as we learned to know her better, discomforts dwindled into nothingness, and isolation seemed no hardship.

During the first few days camp was infested with rats, but an unexpected ally appeared upon the scene and dispersed them most effectually. Strolling from the mess tent one evening after supper, we came upon a huge snake in the very act of swallowing one of our tormentors. Restraining a natural impulse to seize a *machete* and decapitate our uninvited guest, we watched him dispose of his rat and glide off into the jungle. Nearly every night after that he visited the camp, winding silently around beneath our cots, the occasional rattle of a box or tin can alone betokening his presence. The rats disappeared with magical rapidity, and although the idea of our nocturnal visitor was at first distasteful to us, we soon became accustomed to it and looked upon him as a friend. He was not venomous, being of a

variety frequently domesticated in towns to prevent the encroachment of vermin.

We killed a fine specimen of the dreaded coral snake between the office tent and the kitchen. He was of unusual size, five feet and four inches long, but my efforts to preserve the skin proved unavailing, heat and moisture breeding a mass of corruption which made speedy cremation necessary. The brush and rotting logs which lay about our little clearing, too wet to burn, furnished a refuge for quantities of scorpions, whose presence was a constant source of discomfort to us. The ordinary house scorpion found in Nicaraguan towns is little to be feared, although he sometimes attains great size, but the scorpion of the forest is a venomous beast, whose sting is exceedingly painful and frequently attended by nausea, local paralysis, and an annoying swelling of the tongue. After being twice stung and subsequently shaking a monster from my shoe one morning, I conceived a dislike for the species, which made me welcome the appearance of an army of ecitons, or carnivorous foraging ants, who waged a bitter war against the scorpions with ultimate success. Scouring the brush heaps in large force and with admirable method and precision, the little hunters drove their prey from their hiding places, swarmed all over them, attacking them between the joints

of their armor, and, despite desperate and prolonged resistance, eventually tore them limb from limb. Nor were scorpions their only victims; beetles, spiders, centipedes, and even birds fell before the fierce insects, whose nomadic habits are perhaps due to the fact that they soon depopulate their immediate neighborhood. Fortunately they did not invade our tents, perhaps because we had freely scattered lime about.

Nearly the entire Tola Basin was heavily timbered, a goodly number of rubber trees mingling with less valuable varieties. Not far from camp were two cacao plantations, and in the vicinity of the town a good deal of land was cultivated. A road, unusually good for Nicaragua, led from Tola to Rivas, passing through a beautiful and fertile country dotted with well-kept plantations and cattle *haciendas*; along this road ran a portion of our line, to the great distress of the city fathers, who represented to us that prominent citizens returning home Sunday nights in a state of unstable equilibrium, might fall over the stakes and excoriate themselves. Their appeal failing to alter our method of procedure, they resorted to the simple expedient of pulling the stakes as fast as we drove them, but in our absence.

My thoughts never revert to our Tola camp without conjuring up visions of clouds of butter-

flies, myriads of which fluttered through the adjacent woods. Of all sizes, shapes, and degrees of beauty, they fluttered here and there, a veritable rainbow of color. The most interesting, though far from the most beautiful, variety which we saw is known to naturalists as the *Kallima Paralekta*. It is a light green butterfly which, when at rest, bears so striking a resemblance to a leaf that only by the most careful scrutiny can its true nature be discovered. I had probably seen hundreds without suspecting that they were not leaves, when one day I accidentally captured several while pursuing a great blue butterfly of the genus *Morpheo*. After that I noticed large numbers of them, and often amused myself by trying to detect them among the leaves — by no means an easy task.

A natural phenomenon of a different description was a rippling little stream which flowed parallel to the La Flor road for some distance, and then — disappeared. The explanation was simple enough. It flowed along until it reached a bank of porous gravel into which it sunk, and which it no doubt followed beneath the surface to the Rio Grande. The effect of a moderate sized and rapidly flowing stream terminating with absolute abruptness was, however, sufficiently striking.

Tola is an insignificant hamlet, whose only

claim to distinction is that it was taken by Walker during his mad advance upon Rivas at the beginning of his career as a filibuster. It formed our base of supplies until the slaughter house collapsed and the butcher, rather than spend a day or two rebuilding it, retired from business. We then left the town to its historic past and transferred our patronage to Rivas.

By the ninth of August our survey of the Tola Basin was nearly completed, and Mr. Harden and I decided to devote the next day to a trip to Brito and an attempt to secure some good photographs of the headland, while the transit party was finishing up its work. The morning dawned clear and bright, but the forest trail was muddy; we therefore rode slowly, the sunlight struggling through the mass of foliage above us and sparkling on the dark glossy leaves of the rubber plants which grew in great profusion around us. Our horses slipped and stumbled along, now bogging down in some nearly bottomless mud-hole, now clambering laboriously over the twisted roots of some patriarch of the forest, until at last, after what seemed an interminable ride, we emerged upon the bank of the Rio Grande at the La Flor ford. From this point the roads were good — for Nicaragua — and across the broad *potreros*, where herds of cattle were feeding half buried in tall grass, they were dry and hard. Entering the

woods again below the Brito *hacienda*, we followed a trail which led through tangled thickets and along the edge of a mangrove swamp to the mouth of the river, which broadens out just above Brito headland, and then contracts to a narrow opening through the bar of white sand at the base of the cliff. The sea was sparkling in the sunlight and breaking into foam on the rocks and along the sweep of beach to the southeast, and beyond the precipitous headlands which mark the entrance to the San Juan del Sur the jagged Costa Rican mountains thrust themselves, a strip of hazy blue, between the sea and sky. Tying our horses, we climbed about the rocks in search of vantage points, scaring an old pelican from his perch, and sending a thousand crabs scuttling in all directions. From a wet and slippery ledge against which the waves were churning themselves into a mass of seething foam, we got a pretty good view of the headland, the best we could obtain without fording the river mouth, where the sharp triangular fins of several monster sharks were visible. After taking several pictures and lunching in a shady grove a little way up the stream, I scaled the lower headland, which we had considered inaccessible when we made our survey, and of whose summit we knew little.

The headland is precipitous and composed

of partially disintegrated rock, much of it so loose that a very slight disturbance will bring down large masses upon the ledges below. At the point which we chose as most practicable for an ascent there had been a slide, perhaps caused by a recent earthquake, and a mass of crumbling detritus lay at such an angle that one might crawl up over it if no further slip should occur. All went well until I had got fifty or sixty feet from the bottom, when I found that everything I touched moved, and that only by exercising the greatest care could I avoid sliding to the ledges below, beneath a mass of débris. Somehow or other I reached the top and found a narrow knife-edge of rotten rock with a few tottering pinnacles, any of which I could have pushed over. The descent was even more difficult than the ascent, but I finally alighted safe in the surf on the north side of the headland, and we returned to camp well satisfied with our day's work.

The following day we moved to a place on the Rio Grande, about five hundred feet above the point where our line first crossed it, and near the *hacienda* called El Carmen. It was a hard day's journey. The roads were bad beyond description, necessitating frequent detours and an occasional doubling of teams, while the excessive heat exhausted the oxen and rendered frequent pauses imperative. A party of

mozos preceded the *carretas* and prepared a suitable clearing, enabling us to pitch our tents as soon as the teams arrived, late in the afternoon. We were upon the crest of a small wooded hill close to the river, beyond which lay rolling *potreros* clothed in verdure, and a large plantain grove. To the westward the rocky river-bed wound through wooded hills toward the Tola Basin; to the eastward tangled thickets and swampy llanos extended to the continental divide. Heavy and frequent rains kept the country almost impassable, and often prevented the use of the river-bed as a road; for the stream, which during the dry season had been a series of pools separated by bars of gravel through which the water seeped, became a turbid, rushing river, rising with incredible rapidity, sweeping masses of débris toward the sea, and subsiding again to an insignificant rivulet when an occasional clear day permitted it.

Our inaccessible and isolated position rendered it difficult to obtain supplies, and one or two horsemen were constantly employed bringing provisions from Rivas, or scouring the surrounding country for chickens, eggs, and plantains. Owing to the insurrection and a subsequent misunderstanding with Costa Rica, which threatened to end in war, direct communication with Greytown was interrupted during

nearly the entire period of our survey, and of the nine months' supplies which we should have got from headquarters, only two months' allowances ever reached us. We were consequently obliged to subsist upon the country, and to keep men foraging for provisions nearly all the time. The *mozos* received beef twice a week when practicable, and a bountiful supply of rice cooked in lard, *frijoles*, and boiled green plantains. The "officers," as the American members of the corps were called, had whatever was obtainable — chickens, ducks, eggs, rice, *frijoles*, ripe plantains, fruit, and a limited amount of canned food from the headquarters stock. Wild honey of fine quality was abundant, limes could be had for the picking, and the crushed red fruit of a variety of cactus mingled with water furnished a delicious cooling drink. With an occasional bit of game, or some crawfish from the river, we sometimes fared very well, as the following *menu* shows:

DINNER, *September 9, 1898.*

Crawfish.

Black bean soup.

Canned salmon.

Canned beef.

Rice. Green corn. Boiled ripe plantains.

Salad of eggs and alligator pears.

Hard tack. Pickles.

Tea, with milk or lemon juice.

Cigars (literally two for a cent).

Of course we were not always so fortunate, and sometimes our meals were limited in quantity and lacking in variety.

From the El Carmen camp we meandered the upper Rio Grande, Cascabel Creek, and Cañas Gordas Creek, besides running a network of topographical lines. We also ran a line up Guarumo Creek and down Comalcagua Creek to its junction with the Rio Juan Davila, putting in enough of the adjacent topography to enable us to locate and compute a channel to divert the upper Rio Grande eastward into Lake Nicaragua, should it be thought advisable. Most of this work was far distant from camp, but the swampy condition of the country and the lack of good drinking water made it impracticable to move to a more convenient location. A hard day's work, a walk of several miles through the mud, and a bath in the river was excellent preparation for a substantial supper, black native cigars, and a six-weeks-old paper, or long discussions as to the feasibility of establishing a remunerative cacao plantation with no capital and less experience.

Visions of plantations flitted through the minds of several members of the corps, and endless inquiries were made as to the cost of land and labor. We found that a fair average price for unimproved land bought in large tracts was two hundred pesos per cavalleria or

seventy-one and four-tenths cents per acre, assuming exchange at two and a half. Not a ruinous sum, but clearing and removing the small stumps, leaving the large ones to rot out, was estimated at forty dollars per acre, making the value of arable land considerable. The best grade of labor costs fifty cents per day, but it must be borne in mind that a Nicaraguan accomplishes rather less than half as much as his northern contemporary, which brings the actual cost of work to about what it would be in the United States. The cultivation of cacao is probably the most profitable form of agriculture which a man of moderate means and limited experience can successfully undertake. Each native laborer, if employed upon piece work, takes care of about one thousand trees, yielding twelve hundred pounds annually, but the seven or eight years which elapse before the trees begin to bear render the possession of some capital essential to success. Doubtless an energetic American farmer could accumulate money in Nicaragua, but the life involved is not to be recommended.

On the twentieth of September we finished our survey, and two days later we broke camp and moved to Rivas. Defections and assignment to other duty had reduced the number of "officers" to three, and, as I had discharged many of the *mozos*, it was a small party which

struggled along the muddy trail and into Rivas. With mingled feelings of regret and satisfaction we bid adieu to the last of our dusky retainers, our days of labor ended and our work well done.

CHAPTER XI

NARRATIVE—RIVAS TO GRANADA

LIFE in Rivas was a pleasant change from the privations and monotony of the preceding nine months, and we were glad of the two days which elapsed before the sailing of the "Victoria," as it enabled us to stow and make an inventory of camp equipment to be left behind, and to pack such articles as we wished to take with us. The air was full of rumors of another insurrection, and our *mozos* were locked up in the *cuartel* as soon as we discharged them, a vigorous protest from us being necessary to procure their release. "Volunteers" were brought to town in large numbers, sentries were posted everywhere, and the streets in the vicinity of the *plaza* became unsafe after nightfall, a bullet following a challenge so quickly as to disconcert any but a ready-tongued native. On Saturday afternoon suspected citizens were notified to report at the *cuartel*, where they were locked up over night, as a precautionary measure.

Early Sunday morning we were astir, completing our packing and preparing for departure.

Soon after we had finished our coffee and rolls, the usual Central American substitute for breakfast, the whistle of the locomotive from the neighboring market place notified us that it was time to leave, and we set forth, accompanied by a small band of faithful *mozos*, who risked conscription to see us off. Climbing aboard the decayed remains of an American street car, among white-clad men and black-eyed, bare-footed women, we sat until, with a snort, a groan and a jerk, our remarkable train moved off. Rolling along through familiar scenes, never so attractive as when seen for the last time, we reached the lake shore and went aboard the "Victoria." The long wooden wharf was covered with a surging crowd of travellers and friends, stevedores, and women selling *dulces*, fruit or carved *jicaras*, and the neighboring beach was lined with half-naked *lavanderas*, sousing clothes in the water, laying them upon logs or stones and beating them with clubs, the approved native method of washing. "El '93," which was following the "Victoria" about to prevent her capture by insurgents, lay between us and the shore, the gaudy uniforms of her crew contrasting sharply with the heterogeneous costumes of the "volunteers," while a fleet of native sailing craft — clumsy schooners for the most part — swung at anchor near by.

After the delay which travellers in Central

America soon came to regard as inevitable, we cast off our moorings and headed for Ometepe, "El '93" puffing sturdily along in our wake. The day was extremely hot, and the lake lay like a mill-pond around us, but as we gained headway a gentle breeze due to our own motion made it very comfortable where we sat beneath an awning on the hurricane deck. As the mainland faded to a narrow strip of green with purple hills beyond, the lofty, symmetrical cone of Ometepe loomed above us, its lower slopes clad in verdure and its peak of gray volcanic ash vanishing in clouds. It has been inactive since 1883, emitting only small quantities of steam and sulphurous vapor, but it retains its singularly perfect form, in sharp contrast to Madera, another peak on the same island, which, extinct for ages, has succumbed to disintegrating influences and lost the characteristic volcanic shape. Running in as close to shore as the shoal water would permit, we lay to, our keel stirring up the mud beneath, while a large dugout transferred passengers and freight backwards and forwards between the steamer and the beach.

The island of Ometepe contains many aboriginal remains — large stone idols grotesquely carved, burial vases and bowls of pottery, small gold idols, copper implements and little stone amulets. Stone idols are common in

many parts of Nicaragua, notably on Zapatero, a high irregular volcanic island which we passed in the course of the afternoon, midway between Ometepe and Granada.

The tangled forests lying along the Caribbean coast of Nicaragua are populated, as we have seen, by Indians of Carib stock, perhaps descendants of the inhabitants of the lost Atlantis, but they form a comparatively unimportant element of the country's population, and may be dismissed without further notice. The Indians of the central and western districts are of entirely different origin, and probably came originally from Mexico, whence they brought many of the arts of civilization. Although now thoroughly amalgamated, they were formerly not all of the same stock, for Mexico was overrun by numerous tribes from the northward, each succumbing in turn to one more powerful, and breaking up into wandering bands destined to populate the fertile country to the southward. Thus successive migrations to Nicaragua were from different tribes which, while possibly of common descent, had been differentiating for centuries, and had acquired distinctive languages and characteristics. The Niquiranas, or Nicaraguans, who settled about Rivas and on the island of Ometepe, were presumably pure Aztecs, and were more advanced in civilization than were their neigh-

bors, of whose territory they had possessed themselves.

It will readily be understood that the existence of a large number of adjacent independent tribes governed by despotic caziques was provocative of discord, and could not long continue without procuring the aggrandisement of certain rulers and the relegation of others to subordinate positions, either as the result of military operations or of diplomacy and intrigue. Such was the case: a feudal system gradually developed, in which subsidiary chiefs, without relinquishing their power in local affairs, became the personal attendants and lieutenants of greater potentates. Local administrations differed greatly, as the cauzique, although influenced by certain time-honored customs, possessed absolute power. He was assisted by a council appointed for four months from among the old men, which in turn appointed subordinate officers and which might even overrule the cauzique; nevertheless, as the latter could at any time dissolve the council and indefinitely postpone re-convening it, he may be said to have had the whip-hand. A war-chief, whose authority in military affairs was unquestioned, was chosen by the warriors, but the cauzique often accompanied the army and, in case the war-chief was slain, replaced him personally or by immediately appointing a



A NATIVE VILLAGE.

successor. The object of the war was to capture for sacrifice rather than to kill opponents; and he who distinguished himself in battle was accorded the privilege of shaving the head, leaving only a scalp lock of specified dimensions.

Certain districts were governed, not by cañiques, but by councils of old men called *Guegues*, elected by the people. These assemblies seem to have occupied a position somewhat analogous to that of the cañiques, for they administered civil affairs, but relegated military matters to war-chiefs appointed by themselves. These chiefs were *ex officio* members of the councils, and were closely watched by the *Guegues* to prevent an undue centralization of power in their hands.

The houses typical of the country seem to have been rude cane huts thatched with grass or palm leaves, and entirely similar to those used by the poorer portion of the population to this day. They were frequently built around open squares, upon which the temples and public buildings faced, and hedged about with fruit trees. The squares served as public markets, and there upon certain days the products of the country were exposed for sale. Cacao seeds served for money, and for some unknown reason men were excluded from the place, women and boys not yet pubescent doing all the trading.

Marriage was a civil rite performed by the caziique, who led the bride and groom into a small house provided for the purpose, where, after delivering himself of some good advice, he left them alone with a small fire. When the fire had burned out the ceremony was complete, and the couple went to live upon a piece of land provided by the parents. The husband, contrary to the present custom, did the greater part of the work, while the wife devoted herself to trading and light household duties. No one but the caziique was allowed more than one wife, but concubinage was not infrequently practised, and upon the occasion of a certain annual festival indiscriminate licentiousness was permitted. Marriages within families were not only tolerated, but encouraged, as cementing the bonds of relationship. Bigamy, adultery, and rape were rather leniently dealt with, but sodomites and he who debauched the daughter of his master or caziique suffered death. Brothels were publicly kept, and the daughter of poor parents sometimes resorted to prostitution in order to accumulate a marriage portion, usually selecting one of her lovers as husband, when her object had been accomplished.

Murder under aggravated circumstances was punished by death, but the payment, to the relatives of the victim, of a number of slaves or

other articles of value usually sufficed to satisfy the demands of justice.

The prevailing religion seems to have been essentially that of Mexico. Teotl, the supreme power, invisible, absolute, and all-pervading, was the chief of numerous gods and goddesses, in whose honor elaborate ceremonials were held and human sacrifices were offered. Each cañique maintained a number of persons for sacrifice,—prisoners of war, slaves, or voluntary victims,—allowing them to lead lives of luxury and ease until the fatal day, when, as they devoutly believed, the tribulations of this world were exchanged for everlasting happiness. The temples were usually large, low, timber buildings, thatched, with many dark inner chapels, and surrounded by courts, beyond which none but priests and cañiques dared penetrate. Near by were pulpit-like mounds of unburned brick, each supporting a sacrificial stone, an oblong block as long as a man, with convex surface so arranged that when the victim was extended at length upon it, his breast was thrust forward. Upon the day of sacrifice the chief ascended one of these mounds, whence he could observe the ceremony, and when the people had gathered around, the priest announced that an offering would be made to a certain deity. The victim was then laid upon the stone and held by

several assistants while the priest with a sharp stone knife cut open his breast, tore out his heart, and with it anointed the mouth of the idol representing the god to whom honor was being done. But, despite the bloody rites demanded by their religion, the Indians were not a cruel race; indeed, compared with the so-called Christians who subsequently conquered them, they were peculiarly mild and amiable.

Upon leaving Ometepe we headed northward, and by four o'clock were threading our way amidst a multitude of little islands of all sizes, embowered in green and separated by dim, cool channels arched with verdure, which marked the approach to Granada. A few minutes later we reached the long, wooden wharf and disembarked, paying a small tax for the privilege of landing and another for crossing the wharf. An assemblage of carriages that would have rejoiced an antiquarian's heart were waiting to convey passengers to the town, the principal part of which lies at some distance from the shore, and, selecting the most substantial looking, we drove to Downing's hotel, stopping once that the coachman might pay to a mounted collector a *per capita* tax upon his passengers. The hotel stood upon a corner near the *plaza*, and was a substantial one-storied structure built around two courts,

and containing great square bedrooms opening upon both street and *patio*.

A good sized office held a bar which must have been excellent, judging from the assiduous patronage bestowed upon it by both proprietor and guests, and outside was a spacious veranda, where one might sit and watch the passers-by. We were soon comfortably established, and passed eight pleasant days swinging in our hammocks, lounging on the veranda, and strolling about the streets.

Nicaragua was first explored in 1522 by Gil Gonzales de Avila, who sailed from Panama and landed upon the shore of the Gulf of Nicoya, whence, pushing to the northward with a hundred men and four horses, he penetrated the territory of a powerful and hospitable caíque called Nicoya. In return for "fourteen thousand pieces of eight, in gold thirteen carats fine, and six idols of the same metal, each a span long," Gonzales gave him some trinkets and baptized him and his six thousand subjects. Fifty leagues to the northward, between the lake and the sea, about where Rivas now stands, were the domains of a mighty chief, Nicaragua. To him the Spaniards presently sent messages demanding that he acknowledge the sovereignty of the King of Spain and forthwith adopt the Christian religion, upon pain of immediate chastisement.

The wily monarch returned a conciliatory answer and received De Avila with much state, bestowing large quantities of gold and feather garments upon him, consenting to be baptized, with nine thousand of his subjects, and permitting the conversion of his temple into a Christian church by the overthrow of his idols and the erection of a cross. From the territory of this friendly chief Gonzales explored the country in various directions, being everywhere welcomed by the natives, to whom the horses, weapons and beards of the Spaniards were never failing objects of interest. They do not seem to have distinguished between horse and rider, but imagined a mounted man a sort of centaur, large, powerful, and greatly to be feared. Finally the invaders encountered a bellicose caíque called Diriangan, who, attended by five hundred unarmed men and a few women, received his visitors with presents of turkeys and gold, asking three days to consider the proposition that he and his subjects immediately become Christians. Before the time had expired he treacherously fell upon the Spaniards with several thousand Indians; but cotton armor, wooden swords, bows, arrows, and darts were no match for weapons of steel and the strange, terrifying quadrupeds of the white man. However, Gonzales was forced to retreat, attacked

by former friends as he traversed their domains; but upon his return to Panama he gave such glowing reports of the country that Pedro de Arias,—or Pedrarias,—Governor of Panama, resolved to colonize it. He accordingly sent an expedition under Francisco Hernandez de Cordova, who in 1522 founded the cities of Granada and Leon, while Gonzales was seeking in Spain the means to conquer and settle the lands which he had discovered. Upon the return of the latter he invaded Honduras, marched upon the towns established by Cordova, and inaugurated a civil war on a scale unprecedented in the struggles of early consanguineous explorers. Little attention was paid to the mother country, and its orders were more or less openly ignored by successive governors, whose power was almost absolute. In due time the territory comprising Nicaragua was organized as a province of the captain-generalcy of Guatemala, and it remained so until its emancipation in 1823.

The fertility of the country, as well as the cruelty of the Spanish conquerors to the natives, is dwelt upon by the pious Las Casas, Bishop of Chiapas. "It is impossible to express properly the fertility of the country, the excellence of its air, and the almost infinite number of its inhabitants," says this chronicler.

"One might see in this province cities four leagues in length, the great quantity of excellent fruit having drawn together this vast multitude of people. The towns were situated in broad plains, where there were no mountains in which the inhabitants could take refuge; moreover, the climate was so mild and the country so agreeable that only with great reluctance could they resolve to leave it, and they were consequently much exposed to the outrages and persecutions of the Spaniards; but they submitted with the greatest patience, in order not to be obliged to leave their homes. These people are naturally mild and peaceful. The governor, or rather the tyrant, with the agents of his cruelty, decided to treat the inhabitants of this province as those of neighboring provinces had been used, and he committed such crimes, such atrocities, and such massacres as no pen is eloquent enough to describe. He sent into the province fifty horsemen, who slew nearly the entire population, sparing neither age, sex, nor condition. If the poor natives failed to bring them a certain required quantity of grain, or neglected to furnish the requisite number of slaves, they were slaughtered without mercy. As the country is flat, it was impossible to avoid the attacks of cavalry or to escape the fury of the Spaniards.

"The general permitted these brigands to commit all the crimes and robberies which they desired; to take as many captives as they wished, loading them with chains which sometimes weighed sixty or eighty pounds; so that of four thousand persons, barely six survived, the others perishing upon the road, crushed under an excessive weight. To avoid the trouble of unlocking the chain from those who died of hunger, thirst, fatigue, or illness, the heads of the victims were stricken off. . . . There were drawn from this province during a few years over five hundred thousand slaves, all of whom had been born free, while those killed in battle numbered fifty or sixty thousand."¹

Thomas Gage, an English monk who travelled through Nicaragua in 1665, gives an interesting account of the country, which he calls "Mahomet's Paradise, from its exceeding goodness." He describes Granada as a well-built, prosperous town, carrying on a large and profitable trade with the surrounding provinces, and deriving a considerable revenue from the frequent passage of immense mule trains laden with silver, sugar, indigo, cochineal, and hides. He asserts that while he was there "in one day

¹ *Relation des Voyages et des Découvertes que les Espagnols ont fait dans les Indes Occidentales.* Écrite par Dom B. de Las Casas, Évêque de Chiapa. Amsterdam, 1698.

there entered six *Requas* (which were each at least three hundred mules) from San Salvador and Honduras alone, laden with indigo, cochineal, and hides; and two days after from Guatemala came in three more, one laden with silver (which was the King's tribute), another with sugar, and the other with indigo." Ships occasionally sailed from Granada direct to Cartagena or Spain, probably at times of high water, when a small, light-draught craft might pass the rapids of the Rio San Juan.

Granada suffered much in its early days from the attacks of pirates. In 1686 it was taken by French and English freebooters, who landed on the Pacific coast three hundred and forty-five strong, and marched inland by night, intending to surprise the town. Their approach became known, however, and while a portion of the inhabitants fled by water, the remainder entrenched themselves, prepared to offer a desperate resistance. The onslaught of the pirates was fierce, and after a protracted struggle the garrison abandoned the works, and the city fell. But little booty was obtained, nor was the place, destitute of provisions and surrounded by foes, long tenable. After burning the town and falling back to the coast, the marauders re-embarked and continued their adventurous voyage, taking Realejo, Pueblo Viejo, and Chinandega, attacking Leon, and finally marching

from the Gulf of Fonseca to Cape Gracias á Dios, a remarkable military achievement.

Situated upon high land overlooking the lake, built on terraces communicating by steep, paved inclines, regularly laid out, and containing the homes of many people of wealth, Granada is probably the pleasantest town in Nicaragua in which to live. The houses are nearly all one-storied adobe structures, whitewashed, and roofed with semi-cylindrical red tiles. Windows are rare, but broad doors, which usually stand open during the daytime admit light and air, and frequently afford glimpses of distant *patrios* bright with sunshine, fountains and flowers. The streets are dusty in dry weather, and muddy when it rains, and the sidewalks, which are only three or four feet wide, are of different elevations for different houses, communicating by flights of steps, which make walking rather fatiguing.

There is a good sized *plaza* shaded by palms and bread-fruit trees, where an excellent military band used to play several times a week; but some time ago a soldier, smoking a cigarette in the magazine of the barracks, caused an explosion which blew the band into eternity and abruptly terminated the concerts. The place contains several interesting churches, a large market, a theatre which is rarely used, two excellent saloons—called “Chicago” and “New

York" respectively—a cockpit and no doubt various other attractions which we in our short stay failed to discover. The population is estimated at fifteen thousand, or nearly twice that of Rivas. South of the town the rugged crest of the extinct volcano Mombacho rises black and massive against the sky, its sides covered with rich plantations and coffee *fincas* nearly to the summit.

An opportune *fiesta* enabled us to witness a procession different in character from any that we had hitherto seen. Distant bursts of half barbaric music apprised us of its coming, and we hastened to the door just as it turned into the street upon which the hotel stood. A brass band led the way, followed by surpliced prelates, priests, and acolytes bearing crosses and banners, while bringing up the rear was a crowd of fantastically clad maskers, whirling and posing in the mazes of an intricate dance, the blare of trumpets, banging of *bombas*, and shouts of an eager and excited populace furnishing a strange accompaniment to exercises presumably devotional in character.

Sunday afternoon we went to a cockfight, held in the *patio* of an inn, and attended by a large number of the sporting fraternity. The fighting was very uninteresting, but not so brutal as I had expected, the cocks being equipped with sharp steel spurs, which usually insured instant

death to the bird struck, and made the longest fight a matter of a few seconds only. The crowd, however, was decidedly interesting, and seemed composed of all classes of society. Government officials, with roosters under their arms and their hands full of paper money, rubbed elbows with barefooted *mozos* staking their last *centavos* upon a favorite bird, while white-haired patriarchs and cigarette-inhaling stripplings leaned side by side over the board inclosure, watching with bated breath the progress of the fight.

CHAPTER XII

EARLY POLITICAL HISTORY

WHEN the mail-clad Spaniard, a sword in one hand and the symbol of an intolerant, mediæval Christianity in the other, descended upon the helpless aborigines of Central America, he came, not as a humble settler, to wrest an honest living from the land of his adoption, but as a ruthless conqueror, to pillage and destroy, to slay or subjugate the rightful owners of the soil. The history of the early invasions is a tale of horrors, from which the reader turns away aghast, and which not even the boundless courage, vast ambitions and ultimate triumphs of brilliant leaders can palliate. Rich provinces of great extent fell before mere handfuls of determined men, whom the Spanish crown rewarded with titles, grants of land, and powers almost absolute over the vanquished inhabitants. The natives, held in slavery worse than death, tilled the fields of their oppressors, who, increasing in wealth and power, formed an arrogant and idle aristocracy, for whom and by whom the country was governed. The politi-

cal and social distinctions of the Old World were mirrored in the New, and the Viceregal court became a centre from which millions of men, unrepresented and unconsidered, except as instruments for the aggrandizement of their masters, were governed.

The French Revolution, following upon our own attainment of national independence, shook the thrones of Europe and echoed faintly among the smouldering peaks and tangled forests of the captain-generalcy of Guatemala. The oppressed children of the Aztecs, the wandering scions of Castile, caught the sound, and hope, so long a stranger to their breasts, sprang up anew. The downfall of Spain, her relegation to a subordinate place among the nations of Europe, tightened for a time the ties which bound her absent children to her; but with the restoration and the introduction of needed reforms in the mother country came a feeling of discontent that such reforms were not for them, and there arose a cry for independence. The aristocratic portion of the population, fearing for its privileges, but powerless to stem the tide of popular demand, bent all its energies to perpetuating as an independent monarchy the oligarchy which had in fact ruled the country for many years. Thus there were few to oppose secession when, on the 15th of September, 1821, the representatives of the

people met in the city of Guatemala and proclaimed the independence of the country. Conscious of her own weakness, betrayed by those whom she had trusted, Spain made little effort to coerce her rebellious subjects, and the change was bloodless and complete. But scarcely had the separation been accomplished, when a Constituent Assembly was convoked to organize the country as a Republic. The aristocrats, or Serviles, as they were called, saw their visions of ascendancy fade. Fearing the loss not only of prospective power but of material prosperity as well, and encouraged by the establishment of a monarchy in the neighboring State of Mexico, they resolved to sacrifice their lately-acquired independence, and achieve by treachery and force the incorporation of Central America in the empire of Iturbide.

The Constituent Assembly met in Guatemala City, but its deliberations were forcibly suspended by bands of armed Serviles, who assassinated or imprisoned the Liberal leaders, assumed control of the convention, and fraudulently imposed upon the astonished people a resolution declaring the annexation of the country to the Mexican Empire. No sooner had the news of this outrage spread through the sparsely populated country districts than it was met by a general uprising. Granada,

San José, Leon rebelled. The Republicans of San Salvador took the field, defeated the Servile army sent against them, and submitted, only after a long and bloody resistance, to an overwhelming force of Serviles and Mexican troops. But though beaten in the field they never acknowledged the authority of the invaders. Their Provisional Congress, driven from place to place, continued to exist. One of its acts was to decree the annexation of San Salvador to the United States. No action was taken upon this proposition by the American Government; nor was any necessary, for like thunder from a clear sky came the news of the downfall of Iturbide and the dissolution of his empire. Deprived of external aid and hopelessly outnumbered, the Serviles succumbed to the inevitable, resigning the reins of government to the triumphant Liberals. Chiapas was incorporated in Mexico; the remaining States, Nicaragua, Guatemala, San Salvador, Honduras, and Costa Rica, convoked a Constituent Assembly, adopted the Constitution of 1824, and formed a confederation called "The Republic of Central America." Titles and privileges of rank were abolished, the sale of Papal bulls was prohibited, obstacles to emigration were removed, security to foreigners and their property was conceded and slavery absolutely and forever abolished. The liberty of

the press, the habeas corpus and the representative principle were guaranteed, despite bitter opposition from the Servile faction; and, had the people been prepared for it, a just and stable government would have been inaugurated.

But ignorance and bigotry are deadly foes to progress. The Bishop of Leon, aided by rich Serviles and blind adherents of the Church, had vigorously opposed the creation of a Republic, and had incurred the enmity of the predominating Liberal element both in his own city and in neighboring towns. Instigated by him or by his rash advisers, the monarchical faction made demands which, being granted, led to others provocative of domestic discord, and plunged the city into civil war. For one hundred and fourteen days the struggle raged fiercely, father fighting against son, brother against brother. The city was reduced to ruins: a thousand buildings were consumed by fire in a single night; yet still the conflict raged, and only the entrance of General Arce with a detachment of Federal troops restored a troubled peace.

The Church had early arrayed herself with the Servile party, and had proved herself a most efficient ally. Her wealth and homogeneity, the possession of far-reaching and easily manipulated ecclesiastical machinery, and the superstitious awe with which she was regarded

by the more ignorant class of Liberals and Serviles alike, enabled her to wield an influence the importance of which can hardly be over-estimated. A perception of the danger arising from clerical ascendancy and a conviction of the inexpediency of attempting to combat it except by the slow but effective method of popular education, led the Liberal leaders, who were for the most part intelligent and patriotic men, to establish schools for the instruction of the people. The facilities for acquiring knowledge thus afforded were eagerly seized by the illiterate poor, whose evident desire for self-improvement seemed to augur well for the stability and strength of the infant Republic. But in San Salvador, sturdy pioneer of Liberalism, this slow method of combating the power of the Church met with little favor. An assumption of disputed power by the reactionary Archbishop of Guatemala evoked a declaration of the right of the people to choose their spiritual as well as their temporal leaders, and led to the election of a Liberal priest, Dr. Delegado, as Bishop of the State. The Archbishop, of course, protested, and the Pope himself demanded the revocation of the act under pain of excommunication; but to no avail, and Costa Rica subsequently followed the example of San Salvador. Whatever may be thought of the ethics of this step, it was certainly in-

expedient and, by outraging the prejudices of a portion of the population, strengthened the position of the Church and prolonged the struggle between bigotry and political and religious tolerance.

For two years after the inception of the Republic a truly wise and liberal government prevailed. With the exception of the disturbance in Leon (which was an expression of local discontent rather than a movement of national significance), and an abortive attempt to restore the power of Spain in Costa Rica, no open attack was made upon the existing order of things. But the Servile leaders, although apparently reconciled to the Republic, sowed seeds of discord broadcast through the land, seeking to achieve by intrigue and bribery that which their numerical inferiority forbade their attaining by force. Accomplished plotters, possessed of ample wealth and the social position with which to flatter and to dazzle their intended victims, they were a constant menace to the stability of the Government. Certain defects in the Constitution—notably a lack of precision in defining the relation of constituent States to the Federal Government—helped to introduce discord into the Liberal ranks and to prepare the way for reactionary projects. The first acquisition of Servile diplomacy was General Arce, President of the Republic, who,

pretending to have information that the authorities of Guatemala were plotting against the Federal Government, arrested José Francisco Barrundia, Governor of the State, on the 6th of September, 1826, threw him into prison, and disarmed the local militia. The Lieutenant-Governor, Cerilio Flores, was assassinated by Indians at the instigation of their spiritual adviser, an eloquent friar, and inferior members of the State Government were murdered, imprisoned, or forced to flee the country. The Liberals, taken by surprise, were unable to offer any effective resistance. A number under Col. Pierson punished the murderers of Flores, but fell in turn before troops sent against them by the treacherous Arce. A new State Government was organized with Mariano Aycinena as chief, and political espionage and proscription were resorted to, to prevent the rehabilitation of Liberalism. To express opinions inimical to the Servile interests was to court destruction, and terrorism ruled the land.

Encouraged by reactionary successes, Arce convoked the General Congress, with the avowed object of annulling the constitution and establishing a dictatorship, but the excitement was such that no meeting took place. Meanwhile, emboldened by the downfall of Republicanism in Guatemala, the Serviles of Nicaragua and Honduras arose in arms and involved

their States in civil war. San Salvador, loyal to the deposed Barrundia, repudiated the authority of Arce and marched troops against his adherents in Guatemala. Met by superior force, they were repulsed and obliged to assume the defensive, but when attacked in turn they inflicted a signal defeat upon their enemies. The Liberals of Nicaragua, Honduras, and San Salvador now joined forces against the subverters of the Republic, and bitter civil war was waged, in which Costa Rica, remote from the scene of hostilities and insignificant in power, remained a passive but interested spectator. On the 28th of September, 1827, the battle of Sabina Grande was fought, resulting in the defeat of the Republican allies; but this defeat was speedily followed by the utter rout of the victors by troops from Nicaragua and San Salvador. The affair is chiefly memorable for bringing into prominence a man destined to be hailed by the Liberals as the saviour of his country — Francisco Morazan.

Morazan, sometimes called the "Washington of Central America," was born in Honduras in 1799. Although without educational advantages other than those enjoyed by his compatriots, he evinced an unusual quickness of comprehension and personal qualities calculated to make him a leader of men. He rapidly rose to be Governor of his native State,

but, endowed by nature with martial talents, and perceiving that civil advancement depended upon military success, he took the field and led the Liberal troops in the battle to which we have referred. A series of desperate contests followed, in which neither side gained a decided advantage, and which were marked by all the atrocities incident to Central American warfare. On the 17th of December a battle was fought at Santa Ana, in San Salvador, which resulted in the occupation of the town by Servile forces. Although accomplished by gross treachery, this achievement encouraged the reactionary element and emboldened them to attempt a systematic invasion of San Salvador. The opposing armies met near the city of that name, and the Liberals, greatly inferior in numbers, were defeated and cruelly massacred. The town successfully sustained a siege; but outlying hamlets fell, until it seemed as if the Servile triumph were complete. Driven to desperation, the State Government agreed that the capital should be occupied by troops of the invaders and that Arce should convoke a partisan Congress to give an appearance of legality to his decrees. But the people of the city of San Salvador, outraged by this surrender, imprisoned the alien garrison, replaced the Government by one more acceptable to themselves, and renewed the struggle. In this they were aided by Mora-

zan, who, having restored the Liberals to power in Honduras, marched upon the invaders, defeated them, and in two months drove them from the State. Arce had been with the Servile army, but he now fled to Guatemala and thence — the Vice-President refusing to resign his borrowed authority — to Mexico. From San Salvador, Morazan advanced upon Guatemala, where the Serviles, exhausted, discouraged and harassed by their Republican compatriots, were tottering upon the verge of destruction. Several actions were fought, generally resulting in Liberal successes ; and when, on the 15th of March, 1829, Morazan appeared before Guatemala City and demanded its surrender, the Serviles attempted, by offering liberal concessions, to effect a compromise or to gain sufficient time to prepare for further resistance. Convinced of their insincerity, Morazan abruptly terminated the negotiations, and gallantly carried the city at the point of the bayonet.

The Liberal party was now completely in the ascendant. The Federal Congress, dissolved in 1826, was reassembled, and proceeded to elect José Francisco Barrundia as President. All laws enacted during Arce's usurpation of power were abrogated, deposed officials were restored to office, and a just and enlightened government of the people succeeded to a harsh and retrogressive military despotism. The

press, which under the Servile administration had been subjected to a rigid censorship, was restored to freedom; religious tolerance and equal protection to all sects was proclaimed; the right of suffrage was conferred upon all adult males, irrespective of color or condition, and the principle of presumptive innocence and the right of trial by jury were recognized. In deference to popular demand, proceedings—which were never pushed to a conclusion—were instituted against the murderers of Flores, and decrees of banishment against the leaders of the recent insurrection were passed; the great body of Serviles, however, was treated with a leniency and kindness which should have evoked gratitude, but which only seems to have encouraged further acts of treachery. A decisive blow was struck at the Church, who, her interests jeopardized by the prospective spread of liberal ideas and popular education, had not ceased to plot against the Republic and to endeavor to accomplish, by fair means or foul, a return to the oligarchical government under which she felt her material prosperity to be secure. Realizing the inherent incompatibility of progressive institutions and an antiquated ecclesiasticism, and fearing the influence of the clergy over the illiterate and superstitious masses, Morazan on the 11th of July, seized the archbishop and the heads of the monkish orders,

sent them under military guard to the port of Isabal, and shipped them abroad. Convents were abolished, their property was confiscated and applied to educational or other public uses, women were forbidden to take the veil, and in 1832 the laws recognizing Roman Catholicism as the faith of the country were abrogated and complete religious tolerance was reaffirmed.

On the first of April, 1829, Costa Rica, anxious to avoid participation in a quarrel the outcome of which she could not materially affect, announced her withdrawal from the Confederation; but upon the re-establishment of the Republic, in January, 1831, she resumed her former position as one of the constituent States. Thus was established a precedent which subsequently exercised a disastrous influence upon the permanency of the coalition.

Prominent among the benefits expected to accrue from the separation from Spain and the establishment of self-government was relief from excessive and unjust taxation. Starting unembarrassed, well and honestly administered, the Republic would have found her revenues sufficient had not the Serviles, intent upon regaining their lost ascendancy, brought civil war upon the country and paralyzed her resources. The Liberal party, emerging triumphant from a fiery ordeal, found itself facing the

problem of reorganization with depleted exchequer, large debts and an inadequate revenue. The natural expedient, increased taxation, met with universal opposition from the ignorant, who, unable to comprehend the exigencies of the situation, blamed the Government, and became discontented if not rebellious citizens. Public improvements stopped for lack of funds; public schools declined and died away; and the attention of the Federal officials was distracted from questions of national development by the necessity of devising means to maintain the national credit. Loans were procured from England at ruinous rates of interest, and thus a pretext was afforded for subsequent interference by Great Britain in Central American affairs.

For two years following the restoration of the Republic peace reigned, and the country, in spite of factional discontent and consequent administrative friction, made rapid strides toward prosperity. Industries which had been suspended or neglected during the period of turmoil were resumed, two new universities were founded, and diplomatic relations were established with the United States. An attempt to negotiate a treaty with England was made, but an insuperable obstacle was encountered in the unauthorized and unjustifiable retention by that country of a large tract of

territory around Belize. An old treaty with Spain permitting English subjects to cut mahogany within certain limits but expressly forbidding any permanent settlement or the assumption of sovereign rights by Great Britain, was made the pretext for this usurpation, which, from motives of policy, was acquiesced in by the Serviles during their brief period of ascendancy. Now, however, when England proposed a treaty of amity and commerce, the Government, by Morazan's advice, assented, but stipulated that both the territorial limits and the time within which the old treaty should be deemed operative should be clearly defined. Of course the negotiations resulted in nothing and served only to inflame the minds of British agents against Morazan and the party with which he was affiliated. As a practical illustration of their contempt for a nation whose only claim to consideration lay in the possession of a just cause, they seized the island of Ruatan, belonging to Honduras, and expelled the local authorities. This high-handed proceeding was disowned by the British Cabinet as unjustifiable, yet it was repeated in 1841; and in August, 1851, Captain Jolly, of the Royal Navy, solemnly annexed the island to the colony of Belize, an act officially confirmed the following year on the ground of former occupancy, although in direct defiance of the pro-

visions of the Clayton-Bulwer treaty of 1850 as understood by the United States.¹

During this period the Serviles were busily engaged in plotting against the Government, and at the end of 1831 their opposition assumed an active form. The former President, Arce, who had been driven from the country, invaded Guatemala from Mexico, while Dominguez, a Servile who had accepted military command under the Liberal administration, and Ramon Guzman, governor of the Castle of Omoa, incited an insurrection in Honduras. These disturbances were so easily quelled that the Liberal leaders became imbued with a contempt for their adversaries and developed a sense of security calculated to loosen the bonds of union and to pave the way for internal discord. As has been said, the Federal Constitution was deficient in explicitness, and afforded room for honest doubt regarding the extent to which Federal interference in State affairs was permissible. San Salvador, jealous of Guatemala, whom she believed unduly favored by the Executive, announced her adherence to the

¹ The existence of a note from Mr. Clayton to Sir Henry Bulwer acknowledging that "British Honduras was not embraced in the treaty" but declining either "to affirm or deny the British title to their settlement or its alleged dependencies" was unknown to the Senate for about two years after it was written, yet it seems to have furnished England's excuse for violating the spirit, if not the letter, of the treaty.

doctrine of States' rights, by withdrawing from the confederation. Had she been allowed time for reflection she would probably have realized the weakness of her position and voluntarily returned to her allegiance; but effective measures of coercion were adopted and for the first time the Liberal party was as a house divided against itself. Morazan, who had been elected President, now assumed the executive power in the vanquished State and filled the administrative offices, an unjustifiable and impolitic proceeding, which antagonized all advocates of States' rights and threatened to disrupt the country. Honduras, Nicaragua, and Costa Rica declared their independence; San Salvador, encouraged by their example, did likewise; and only by abandoning its position and conceding the dangerous doctrine of the right of secession, was the General Government able to effect a reconciliation and reunion.

A period of unrest ensued. The rural clergy, antagonized by the abolition of tithes and the legalizing of civil marriages, incited the Indians to revolt, and a widespread plot against the foreign element culminated on the 24th of July, 1832, in the proclamation of an Indian government and an indiscriminate attack upon all those of alien race. The outbreak was readily checked, the leader shot, and the priests punished by the suppression of a large number

of Church holidays. In 1834 occurred a clash between State and Federal authorities in San Salvador, and Nicaragua was disturbed by civil strife. The following year Costa Rica became involved in domestic troubles, caused by local jealousies and encouraged by the ubiquitous clergy. These petty discords are important only as evidences of the disturbed condition of the country, which was indeed upon the verge of anarchy.

In 1835 the Federal Congress, which had removed to San Salvador, promulgated a new constitution based upon that of 1824; but notwithstanding its excellence the conflicting interests of the constituent States, no one of which was willing to concede anything, made its ratification impossible of accomplishment. The cloud of popular ignorance which brooded over the land, and which had been only partially dispelled by the efforts of enlightened Liberal leaders, was a constant menace to free institutions. Influenced more by sentiment than judgment, unaccustomed to consider the will of the majority decisive unless sustained by force, and unwilling to sacrifice immediate personal benefit for the ultimate good of the community, the people were in truth unfit for self-government. Equitable taxation was deemed extortion, trial by jury was thought an unwarrantable imposition upon the members of

the panel, and the substitution of suitable prisons for gruesome dungeons was regarded as an expensive and needless form of public philanthropy. A shocking manifestation of the danger of ignorance occurred upon the first appearance of cholera, which spread through the country with marvellous rapidity and struck terror to the hearts of all. The Government, ever ready in times of emergency, took active measures to stay the plague. "Not only all the medical staff of Guatemala, but most of the young students, were furnished with medicines and sent to those places where it was thought their presence was most urgently required. The poor Indians, who were dying in great numbers, are generally panic-stricken when the least epidemic prevails. Their terror was now excessive. The priests, who had before learned to improve even such opportunities, were ready to foment their fears, and to awaken their resentment against the Liberals, by insinuating that they had poisoned the waters with a view to destroy the Indians, intending to re-people the country with foreigners; and as a proof of this they pointed to the colony just established in Vera Paz. The too credulous aborigines, who had so lately been excited against some of the reforms, and especially that of trial by jury, needed no more to rouse them to rebellion. Their cry was now directed

against the poisoners and the foreign residents. Many of the doctors had to effect their escape as best they could. Some were seized and killed, being forced to swallow the whole contents of their medicine chests, or water was poured down their throats till they died; and the results were considered conclusive evidence of their guilt."

The insurrection became general wherever the aborigines predominated, and in other parts of the country tumults arose. An attempt to disperse a riotous assembly at Santa Rosa, on the ninth of June, 1837, resulted in the defeat of the troops and the elevation of the leader of the mob, Rafael Carrera, to a position of national importance. Born amid squalid surroundings, illiterate, superstitious, unscrupulous and cruel, Carrera was a fit leader for the fanatical element which he represented. The first engagement after the affair of Santa Rosa resulted in the defeat of the insurgents; but the troops, exasperated by the stubborn resistance offered, were guilty of excesses, which intensified the hatred of the Indians and made reconciliation impossible. Guerilla warfare raged, and the country was soon in a state of anarchy. In Guatemala, considerations of public safety induced the Liberals to attempt a union of political parties and the establishment of a neutral

Government; but as a result of Servile machinations the new administration displayed reactionary tendencies so marked as to cause general dissatisfaction, which culminated in insurrection. In this crisis both factions turned to Carrera, who marched upon Guatemala City, captured it, and assumed control of the government. But the Indian soldiery could not be restrained. A brief reign of terror was followed by a popular uprising, the expulsion of the invaders, and a breach between Carrera and the Liberal party, which time was powerless to heal. The Serviles, aided by savage hordes of aborigines, achieved complete supremacy, and the advocates of liberty were driven into exile.

Up to this time the Federal Government, conceding the right of States to regulate their own internal affairs, had not interfered in the Guatemalan insurrection; but the complete destruction of the legitimate State Government and the substitution of one based upon force was now thought to justify and to demand Federal intervention. Morazan accordingly took the field and, after an indecisive campaign, advanced upon the city of Guatemala. The people, encouraged by his approach, demanded and obtained the resignation of the Servile authorities; and these, realizing their inability to stand before the troops of the Repub-

lic, retired with affected willingness. A new election resulted in the re-establishment of a Liberal government, a proclamation of general amnesty, and the negotiation of a nominal peace with the insurgents. But hardly had the Federal forces left Guatemala before Carrera with his Indians returned to the attack, won two unimportant actions, reached the city so soon after the news of his approach that no resistance was practicable, and inaugurated an era of such violence as has never been exceeded even in the bloody annals of Central American warfare. "Who can describe the agony of Guatemala beneath the fury of the savage, and the oppression of his hordes? It is fearful to recall the continued assaults on the houses, within which, through doors and windows, the roving soldiery wantonly discharged their arms, killing and wounding the unresisting occupants, without regard to age or sex. Insult and assassination were common in the public streets, in the broad light of day. What then were the horrors of the night, when the doleful songs of the savages, mingled with drunken shouts, the shrieks of violated women, and the groans of husbands, fathers, and brothers, slaughtered in vain attempts at resistance, all combined to appall the souls of men? All this time, however, the Serviles enjoyed immunity, beneath the

shadow of the monster. He received the homage of the noblesse; incense was offered to him in the temples, and in the great cathedral he was impiously proclaimed as an angel sent of God!"¹

In the midst of this triumph General Salazar attacked a large body of insurgents returning from the sack of a neighboring town, killed five hundred, and so alarmed Carrera that he abandoned the city and incontinently fled. Had he been promptly pursued, the insurrection might have received its death-blow; but a little time sufficed to restore his self-confidence, and he set off upon a predatory expedition into San Salvador, capturing Santa Ana and Aquachahan and retreating to Guatemala, where he was again met and defeated. A series of unsuccessful encounters which ensued so discouraged the insurgents that their leader felt the necessity of yielding, not, however, without making terms favorable to himself. He became commander of Mita, and, by maintaining a large military force, retained his position as a power in the State.

The unsettled condition of the country, the ease with which revolts were incited and sustained, demonstrated the weakness of the Government and brought contempt upon it. Contemplation of the chaotic state of the Re-

¹ Don José Barrundia.

public so discouraged the members of the Federal Congress of 1838 that, admitting their inability to harmonize conflicting interests, they delegated to the constituent States many of the powers previously vested in the General Government, and adjourned, never to meet again. The result was a virtual dissolution of the Confederation, for although efforts were made to maintain it, the selfishness of individual States formed an obstacle which no exercise of diplomacy could overcome. Nicaragua and Honduras declared themselves independent republics; Costa Rica submitted to the wise but despotic government of a self-appointed chief, Carillo; and at the end of the year San Salvador, Guatemala, and a new State, Los Altos, alone adhered to the decaying Federation. Morazan, in despair at the utter downfall of a political structure to the rearing of which his life had been devoted, unwilling to concede the right of secession, and realizing that he, as President, was the sole remaining representative of Federal union, declared his intention of retaining the supreme power and of compelling the allegiance of disloyal States. His policy led to collisions with Nicaragua and Honduras, and an indecisive war was waged. The Serviles of Guatemala, deeming the time propitious, made overtures to Carrera, who, at the head of five thousand men, marched upon the city, took it, and assumed

the governmental functions. Another reign of terror followed. Liberal laws were abolished, adherents of the Republic were put to death without the form of trial, and finally the withdrawal of the State from the Confederation was decreed. An insurrection in Los Altos, inaugurated by priests and encouraged by Carrera, resulted in the overthrow and murder of the Liberal authorities and the reincorporation of that State in the Dictatorship of Guatemala.

San Salvador was now the sole exponent of Republican principles ; but Morazan, undaunted by reverses and relying upon his personal popularity, raised a force of twelve hundred men, advanced upon Guatemala City, entered it on the eighteenth of March, 1840, and made a desperate but unsuccessful fight for supremacy. Surrounded by an overwhelming force of enemies from whom no mercy could be expected, he gallantly cut his way out, losing more than half his men, and retreated to San Salvador. But his absence from the capital had allowed the disaffected to plot against him, and, unable to disguise the fact that all was lost, he fled with a few faithful friends from the land to which, with rare patriotism, he had devoted the best years of his life.

To follow in detail the history of the next few years would be an unprofitable expenditure of time. It is a discouraging tale of violence

and crime; of an enlightened minority struggling against ignorance and prejudice; of justice outraged and might triumphant. Carrera ruled in Guatemala by force; Costa Rica, prosperous from natural causes, submitted without a murmur to the salutary dictatorship of Carillo; while Nicaragua, San Salvador, and Honduras directed their affairs as best they could. Encouraged by an ineffectual attempt to re-establish the Federal Republic, and relying upon a widespread dissatisfaction with Carrera's despotic government, Morazan returned to San Salvador at the head of a few devoted followers in 1842. Finding the country unprepared for his projects, he withdrew to Costa Rica, where he readily deposed Carillo and became Governor. But the popular sentiment upon which he depended was short-lived. His enemies seized a favorable moment to declare against him, and he and a handful of adherents were surrounded in San José by an overwhelming force. A gallant defence and a retreat to Cartago availed him nothing; with his two sons and principal officers, he was captured, tried for inciting rebellion, and immediately shot. Thus did Francisco Morazan, after a lifetime of devotion to his country, reap the inevitable reward of Central American patriots.

Morazan's mantle descended upon his trusted lieutenant, General Cabañas, an upright, able

man. With a band of sympathizers he retired to San Salvador, where he was welcomed by Malespin, then in practical control of the country. The latter, a former bandit, had been identified with Carrera, but, recognizing the prevalence of liberal sentiment among the people, he had thought it expedient to change his views and to affect the interests of the masses. Civil dissension followed, and a state of virtual anarchy existed throughout Central America: principles were cast aside or subordinated to the petty jealousies of military leaders, whose quarrels and alliances form an historic tangle which we shall not attempt to follow. An invasion of Nicaragua by Honduran and San Salvadoran troops under Malespin, in 1844, and a bloody struggle at Leon, ushered in an era of comparative peace. This peace was broken by an unimportant local disturbance, by the English seizure of San Juan in January, 1848, and by Somoza's insurrection of 1849.

A dispute between Don Fruto Chamorro, the Servile leader who succeeded Pineda as President of Nicaragua in 1851, and Don Francisco Castellon, representing the Liberal party,—each of whom claimed to have been chosen Chief Executive at the biennial election of 1853,—again plunged the country into civil war. Chamorro, being in actual possession

of the reins of government, promptly arrested his rival, banished him from the country, and on April thirtieth, 1854, had himself proclaimed President for four years. Castellon had sought refuge in Honduras, where he was well received by President Cabañas; but within a week of Chamorro's bold announcement of the proposed extension of his incumbency, the Liberal leader landed at Realejo, gathered his adherents about him, and soon drove his rival to the Servile stronghold of Granada. A long and indecisive siege followed. Castellon was proclaimed Provisional Director by his party, and Chamorro, dying on the twelfth of March, 1855, was succeeded by Don José María Estrada. The Liberal troops were commanded by General José Trinidad Muñoz, a veteran of Santa Ana's, while the Servile forces were led by Don Ponciano Corral, an able but unscrupulous man, who was subsequently shot for treachery.

Such was the state of affairs when there appeared upon the scene a man destined not only to influence materially the course of Central American events, but, by the brilliancy and daring of his brief career, to concentrate the attention of the civilized world upon what, but for him, would have been an unimportant struggle. This man was William Walker, the greatest of modern filibusters.

CHAPTER XIII

WILLIAM WALKER, FILIBUSTER

WILLIAM WALKER was born in Nashville, Tennessee, on the eighth of May, 1824. He was the eldest son of a Scotch banker, and was destined by his parents for the church; but although he essayed three professions before reaching his twenty-fifth year, the ministry seems never to have appealed to him as a desirable or suitable career. The University of Tennessee, from which he graduated in 1838, afforded him the elements of a sound education, which a course of medical lectures in Edinburgh and two years' travel on the continent of Europe were intended to complete; but a brief professional experience in Philadelphia and Nashville caused him to abandon medicine. He then went to New Orleans, studied law, and was admitted to the bar. His new pursuit seems to have attracted him as little as the practice of medicine, for he soon forsook it for the fascinations of journalism. In 1849 his restless spirit drove him westward, and the following year he reached California and became editor of the *San Francisco*

Herald. A short imprisonment for contempt of court, a duel without serious results, and a brief return to the practice of law marked the next two years and led him to the threshold of his adventurous military career, which ended in death but rendered his name historic. Urged by his "destiny," as he called it, he visited Sonora at the time when De Boulbon's first expedition was approaching its unfortunate conclusion. Thenceforth his dreams were of martial glory, of empires wrested from nerveless Spanish-American hands, of a new home for slavery, in which he fervently believed.

In planning his career of conquest, it was perhaps natural that his thoughts should turn first to Sonora, from which De Boulbon had just been driven. Unlike the latter, he was unable to negotiate any contract that could be construed as an excuse for interfering in Mexican affairs, and the United States Government was actively hostile to filibustering projects; but notwithstanding obstacles that would have daunted most men, he boldly undertook the conquest of the western States of Mexico. Funds were supplied, somewhat sparingly, by rich slaveholders interested in extending their sphere of influence, and a sufficient number of adventurers were attracted by the promise of five hundred acres of land

and four dollars daily pay for each man. A brig was chartered, arms and ammunition were procured, and all was ready for a start, when, in July, 1853, the United States marshal seized the vessel. Three months later a more successful attempt was made, and forty-five "emigrants," including Walker and Emory, sailed for La Paz. Reaching their destination after a brief stop at Cape San Lucas, they captured the town on November third. Three days afterwards a vessel bearing a new Mexican Governor arrived, and was promptly seized. An election was then held, resulting in the choice of Walker as President, and ten minor offices were filled by the appointment of as many adventurers. A declaration of independence was issued; Sonora, which had not yet been invaded, was solemnly annexed, and its name was bestowed upon the new Republic.

Meanwhile, recruiting had been actively carried on in San Francisco, and on the seventh of December between two and three hundred filibusters sailed to join their chief. Their arrival at Walker's camp meant no great accession to his strength, however, for the new-comers proved a mutinous lot, most of whom subsequently deserted. The discovery of a plot, to blow up the magazine and decamp during the ensuing confusion with such booty as could be secured, resulted in the trial of a dozen conspirators and

the execution of two of them. The troops were then mustered and permitted to choose between submitting to salutary discipline and leaving the camp. The original party and a few of the new arrivals proved faithful; the remainder were disarmed and allowed to go.

A little army of less than a hundred adventurers now set forth into the wilderness to invade and subjugate the State of Sonora. Hostile Indians hovered about their flanks, disease and desertion assailed their dwindling columns; but not until their force was reduced to less than fifty men did they reluctantly turn back. The Mexicans, emboldened by their retreat, hung about, picking off stragglers but avoiding open combat. Where the trail passed through a narrow valley between commanding hills, Indians appeared ahead and on the flank, and opened a harassing fire. His Excellency, the President of Sonora, a boot on one foot, a shoe upon the other, resorted to strategy. Leaving a dozen men concealed in the bushes, he fell back toward the entrance to the gorge, which had already been occupied by the enemy. Deceived by apparent retreat, the Indians who had disputed his passage pursued him, riding straight into his skilfully planted ambush. A dozen rifles emptied as many saddles, and the filibusters met with no further resistance from their amazed and cowed foes. Thirty-five tattered, footsore

adventurers reached San Vincente, where a garrison of eighteen men had been left, only to find that twelve had deserted, while the other six had fallen victims to a Mexican attack. That the conquest of Sonora had failed could not be concealed, and the handful of would-be conquerors were compelled to turn their faces toward the Californian frontier. A sharp skirmish dispersed the opposing natives, and on the eighth of May, 1854, thirty-four gaunt survivors of the army of Sonora marched across the line and surrendered to the United States authorities. The trial of their leader for breaking the neutrality laws ended in acquittal, and he resumed his journalistic labors in San Francisco. But while his expedition had ended in failure, he had achieved a military reputation which enabled him to procure both recruits and funds for the invasion and conquest of Nicaragua.

In October of the year which witnessed the downfall of the Republic of Sonora, an American named Byron Cole, an agent of Walker's, appeared in Nicaragua and made a contract with Castellon to supply his government with three hundred American "colonists," who, in return for a liberal grant of land, were to perform military service. The Democratic army was hard pressed by Servile forces, and the prospect of aid from a formidable corps of American riflemen was exceedingly welcome.

But the expected reinforcements were slow in coming. Walker fell sick, funds were difficult to procure, and it was not until late in April that preparations for the departure of the filibusters from San Francisco were completed. At the last moment a new difficulty arose. The brig "Vesta," purchased for the expedition, was attached for debts incurred by her former owners; but Walker succeeded in obtaining a release and slipping away to sea on the morning of the fourth of May, 1855, before other hungry creditors could detain him. Fifty-six adventurers in that ancient brig skirted the Pacific coast, and after a long and stormy voyage reached Realejo on the sixteenth of June. Colonel Ramirez and Captain Doubleday, of the Democratic army, met and escorted Walker and Major Crocker to Leon, where they were warmly welcomed by the Provisional Director, Castellon. The entire party of Americans was received into the Nicaraguan army, organized as a separate corps with Walker as colonel, Kewen as lieutenant-colonel, and Crocker as major, and named "La Falange Americana," "the American Phalanx."

The Serviles controlled the transit route from San Juan del Sur to Virgin Bay on the lake, whence lines of steamers ran to Greytown, and it was decided that Walker should possess himself of this important road and the adjacent

country. The project commended itself to the adventurer, partly because it insured him an independent command, partly because it enabled him to communicate readily with San Francisco, and to obtain supplies and recruits.

He sailed from Realejo in the "Vesta" on the twenty-third of June, 1855, with his handful of Americans and about one hundred and fifty native troops, landed near Brito, and advanced upon Rivas, which was strongly fortified and garrisoned by twelve hundred men under Colonel Boscha.

The march from the coast began at midnight during a heavy rain and continued throughout the following day, much time being lost by the difficulty of keeping to the trail in the darkness and the muddy condition of the country. About nine o'clock in the evening the little force reached the village of Tola, marched down the street undetected in the rain and darkness, took the *cuartel* by surprise, and killed several of the enemy without loss to themselves. As this encounter could not fail to apprise the Rivas garrison of their approach, haste seemed unnecessary; they therefore rested over night, and set out again next morning after a substantial breakfast, much refreshed and encouraged by the brilliant flood of sunshine which had followed the storm. There were no signs of the enemy until the outskirts of the town were

reached, when a barricade, through which grinned the muzzle of a twenty-four pounder, brought the adventurers to a standstill.

Instructing the native troops to follow the Americans, and by occupying strategic positions within the town to prevent the escape of the enemy, Walker formed his little force in column and advanced at a brisk charge. Undismayed by a hail of grape and canister, which passed harmlessly over their heads, the little handful of Americans passed the barricade, only to find another and more formidable one before them, while a brisk cross-fire from loopholed walls made their position far from safe. They advanced toward the plaza, hugging the house walls to avoid the hail of bullets, and finally reached a point where a hot fire from unseen foes rendered shelter imperative. After a brief consultation they broke into a substantial building, barricaded the shattered door, and stubbornly resisted the fierce attacks of an enemy encouraged by success, until heavy losses and the appearance of artillery convinced them of the necessity of cutting their way out, or perishing.

A bold dash enabled them to gain the shelter of a wooded ravine, through which they retired, holding the enemy at bay with their unerring rifles. Once in the open country, near San Jorge, they took counsel of one an-

other, and decided to fall back upon San Juan del Sur, hoping to seize some craft and make their escape, since the native auxiliaries had deserted, and further offensive operations were out of the question. The retreat was successfully accomplished, although the presence of wounded men retarded it considerably; and by seizing a Costa Rican schooner the whole party escaped to the "Vesta," which was cruising off the coast. The half dozen wounded Americans left in Rivas were chained upon a pile of faggots and burned alive, by order of Colonel Boscha.

This affray cost the lives of some of Walker's most valued men. Crocker was wounded in two places, and his right arm was broken, but he used his pistol with his left hand until a third bullet laid him dead. Kewen fell; Doubleday was shot in the head, although not fatally; and De Brissot and Anderson were wounded.

Returning to Leon with his men, Walker preferred charges against Colonel Ramirez, commander of the native auxiliaries, alleging that his defection was due to an understanding with General Muñoz, whose jealousy of the filibuster was apparent. Castellon, loath to offend Muñoz, hesitated to act, and Walker embarked his men aboard the "Vesta," under pretence of offering his services to the President of Honduras. At this juncture Muñoz

was slain in battle with the enemy, and the Provisional Director, relieved from his awkward predicament, begged Walker to return. But the latter, who had found a partisan in Don José María Valle, sailed for San Juan del Sur, reached there on the twenty-ninth of August, and advanced four days later upon Rivas. At Virgin Bay he was attacked by six hundred men under Guardiola, a notorious and cruel Honduran brigand allied to the Serviles, who withdrew after a fierce battle of two hours, leaving sixty dead and a hundred wounded upon the field. The filibusters and their native auxiliaries under Valle, outnumbered five to one, lost only three natives killed and a few, Americans and Nicaraguans, wounded.

Although successful in this engagement, Walker returned to San Juan del Sur, where he was joined by numbers of Californian recruits. There he first learned of the death of Castellon, who had fallen a victim to the cholera raging in the land. Meanwhile Corral, Guardiola's successor in command of the Servile forces, fell back upon Rivas, and prepared to dispute the advance of the filibusters. But Walker, learning from intercepted correspondence that Granada was well-nigh defenceless, determined to avoid battle and to surprise the capital. To this end, the Democratic army, now four hundred strong, left San Juan on the

morning of October eleventh, marched to Virgin Bay, and embarked upon a lake steamer for Granada. The time was well chosen. General Martinez, of the Servile army, had just defeated the Leonese, and was in Granada on his way to Rivas, where he proposed to meet and annihilate the northern adventurers. All day long the banging *bombas*, pealing bells, and shouting populace had done honor to the victors. *Aguardiente* flowed like water, until the valiant *veteranos* felt a sentiment akin to pity for the filibusters who must soon encounter them. Far into the night the sound of revelry was heard, and not until the grey of morning streaked the eastern sky did the city sink to sleep. But suddenly a musket shot awoke the nodding sentry at the barrack gates. Another and another rang out clear, followed by a crashing volley from the deadly American rifles. A terror-stricken picket fell back in disorder, and close behind came the advance guard of the Democrats, lead by Walker and Valle. One hundred and ten men carried the town by assault, losing only a drummer boy, while the frightened Serviles saved themselves as best they could.

Firmly intrenched in the stronghold of his enemies, Walker established a provisional government and attempted, although at first unsuccessfully, to negotiate with Corral. The

prospect of a peaceful settlement was diminished by the rashness of a new accession to the filibusters' ranks, Parker H. French. By an ineffectual attack upon Fort San Carlos, French provoked the Serviles to retaliate by killing half a dozen neutral Californian passengers at Virgin Bay, and by firing upon a Transit steamer at San Carlos. Unable to punish the guilty individuals, Walker adopted the novel expedient of thrusting the responsibility for this outrage upon the Servile Secretary of State, who had been captured when Granada was taken. The Secretary was accordingly tried by a court-martial of his countrymen, found guilty, sentenced to death, and executed, the victim of a new interpretation of the principles of constitutional government. But whatever may be thought of the justice of this proceeding, its political effect was undoubtedly good. Corral immediately agreed to open negotiations, and a meeting between the opposing generals was arranged for the twenty-third of October. The conference took place at Granada, which decked itself in gala attire to welcome the approach of peace. Two hundred filibusters, desperate men with red ribbons tied around their black slouch hats, trousers tucked into cowhide boots, and trusty rifles glittering in the sun, joined their swarthy allies in greeting the Servile commander, who, accompanied by Walker and his staff,

entered the town and rode to the Cathedral, where High Mass was celebrated. An agreement was drawn up providing for a suspension of hostilities, and Don Patricio Rivas was appointed President *pro tempore*. Walker became commander-in-chief of the army of twelve hundred men, at a salary of six thousand dollars a year, while the portfolio of war in the new cabinet was given to Corral. In consenting to this arrangement Corral betrayed the interests of the so-called Servile President, Estrada; he was also faithless to his new friends, for soon after signing the treaty he wrote to Guardiola and other Serviles urging a renewal of hostilities and promising substantial aid. The correspondence fell into Walker's hands and was promptly placed before the President and Cabinet. A court-martial was ordered, consisting, by prisoner's request, exclusively of Americans, and Corral threw himself upon its mercy. There could be no doubt of his guilt; and, notwithstanding his great popularity and the intercession of influential friends, he was sentenced to death, and shot, as a warning to his accomplices.

Recruits from the United States flocked to Walker's standard, attracted by his success and the alluring prospects held out to them, and filibustering became a popular occupation. Numerous expeditions were organized, directed

chiefly against Cuba and the Central American republics, but they usually resulted in disaster and death to the participants. The so-called Kinney expedition was one of these unfortunate fiascos. Robert Charles Frederick the First, king of the Mosquito Coast, had bartered away a part of his domain for rum and various other essentials of his recently acquired civilization ; and the title to this tract of land finally passed into the possession of Henry L. Kinney of Philadelphia. The latter attempted to occupy his property, but numerous unforeseen obstacles intervened. The grant had been revoked by the King in an interval of sobriety ; Great Britain, his self-appointed protector, repudiated it ; Nicaragua claimed the disputed territory as her own ; and finally, to complete the adventurer's discomfiture, the United States authorities arrested him as he was upon the point of starting for his alleged possessions. He finally succeeded in effecting his departure, but was wrecked upon Turk's Island, and reached Greytown with his expedition in a badly demoralized state. Many of his "colonists" went up the river to join Walker, who, firmly established in power, returned a curt refusal to Kinney's suggestion of an offensive and defensive alliance, and even threatened to hang that gentleman should he find him upon Nicaraguan soil.

Within four months of the formation of the

new government Walker had collected a force of about twelve hundred Americans and other foreigners. Many of these bold adventurers were surprised and disappointed to find themselves subjected to rigid military discipline, quite different from the license they had anticipated. But the well-behaved had nothing to complain of, and had peace lasted, their material prosperity would have been assured. Unfortunately, the sudden rise of an obscure adventurer aroused a host of powerful enemies. Great Britain, whose systematic encroachments upon the Isthmus had resulted in the establishment of numerous territorial claims, saw with alarm the growing power which seemed to threaten her supremacy and used all her arts to destroy it.

The policy of the United States, while not actively hostile, was of a nature to invite rather than discourage the hostility of others. The country was divided in its views of the filibusters' cause, the anti-British element desiring the recognition of Walker's government as a means of checking English aggression, and the Abolitionists opposing it as encouraging the spread of slavery. Thus the Administration, anxious to please everybody, was in a quandary, which it sought to escape by refusing to receive Parker H. French, the accredited Nicaraguan minister, until satisfied that the existing government was a legiti-

mate and stable one. French, whose antecedents were not of the best, was even arrested on an old charge, a proceeding which Walker chose to regard as a breach of international etiquette, and which caused a suspension of diplomatic intercourse between the two countries. A few months later another Nicaraguan minister was refused recognition; but a third, the Padre Vijil, bringing news of Walker's successes against his Costa Rican and Servile foes, was received. He remained at his post until, disgusted by the studied courtesy with which he was treated, he relinquished his mission and returned to Nicaragua.

Encouraged by the failure of the United States Government to give support, material or moral, to the filibusters, and aided financially by Great Britain and Peru, Costa Rica expelled a commission sent from Nicaragua to negotiate a treaty of peace, and, on the twenty-sixth of February, 1856, declared war against that country. President Rivas at once issued a counter declaration, and Walker, as Commander-in-chief of the army, prepared to conduct an aggressive campaign in the enemy's country. But Colonel Louis Schlessinger, who was chosen to lead the advance, proved both incapable and cowardly. His little force of two hundred men was surprised by five hundred Costa Ricans under Baron von Bülow,

and utterly defeated, despite a brave resistance by the New York and California companies under Captain Rudler and Major O'Neill. Schlessinger fled at the first shot, followed by the French and Germans; but the Americans held out until more than half their number had fallen, when they retreated across the border. The prisoners and wounded were massacred, by order of President Mora.

The result of this defeat was disastrous to the Democratic cause. The Serviles, suppressed but not defeated, spread the tidings far and wide. The neighboring republics became firmer in their refusal to recognize the Rivas government. Guardiola prepared to lead his hordes upon Leon; the faint-hearted among Walker's men applied for leave of absence or deserted; and their leader tossed upon a sick bed, unable for the time to stem the tide of adversity. To add to the misfortunes of the filibusters, the steamers of the Transit Company were suddenly withdrawn, cutting off communication with California and preventing the accession of recruits or the receipt of munitions of war. This hostile move on the part of the Company was due to Walker's action in revoking its charter and seizing its property for non-payment of large sums due to the Government. By the terms of the charter Nicaragua was to receive

ten thousand dollars annually and ten per cent of the net profits accruing under the concession; but the Company, whose history is characterized by Minister Squier as "an infamous career of deception and fraud," manipulated its books so as to show no profits, and for a long time evaded its obligations. A commission appointed to investigate the matter having reported that \$250,000 was lawfully due to the Government, Walker resorted to the drastic measures already mentioned, apparently oblivious of the fact that, while his position was morally sound, he was guilty of indiscretion in making a powerful and relentless enemy. Cornelius Vanderbilt, then manager of the Company's affairs in New York, angry at the sequestration of his property, extended financial aid to Costa Rica, thus inaugurating a bitter personal warfare, in which the power of wealth was used with ultimate success against a well-nigh penniless adventurer.

Surrounded by dangers, Walker arose from his bed and took personal command of the army. As the withdrawal of the California steamers rendered occupation of the Transit route useless, he fell back to Granada with his entire force, leaving the Costa Ricans to possess themselves of Virgin Bay and to show their appreciation of Mr. Vanderbilt's assist-

ance by killing his servants and burning his property. President Mora established headquarters at Rivas with Baron von Bülow and three thousand Costa Rican regulars; he felt safe from attack, as Walker was apparently preparing to leave the country, and the lake steamer "San Carlos" was carrying troops across the lake and down the river. But the filibuster struck when least expected. Leaving Granada with four hundred Americans and a hundred native auxiliaries, he entered Rivas by four different routes at eight o'clock on the morning of the eleventh of April. The Costa Ricans, although surprised, offered a stubborn resistance, killing and wounding fifty Democrats, and sustaining a loss of about two hundred, before they were driven from the plaza and cathedral. The Americans, outnumbered six to one, entrenched themselves in the cathedral until the dawn of the following day, when they withdrew with their wounded, unhindered by the enemy. Although this battle was a technical defeat for Walker, it showed so conclusively the superiority of the foreigners, that Mora was discouraged and lay idle at Rivas until a still more terrible foe sent him posting southward. The putrefying corpses of the slain, thrust into wells or left to feed the buzzards, engendered an awful pestilence, before which the army of

occupation melted away like mist. Mora fled. Cañas, upon whom the command devolved, remained until the arrival of several hundred American recruits at Granada seemed to pre-sage renewed activity on the part of the filibusters, when he abandoned his wounded and set out for Guanacaste. Five hundred gaunt stragglers crossed the frontier, all that remained of the army that had set forth to crush the Northern adventurers.

The election for President held in May, 1856, had been so flagrantly irregular that Rivas ordered a new one in June; and the Serviles, aware of the impossibility of electing one of their own party, and fearful of their Democratic countrymen, chose Walker as their candidate. Thereupon the other three aspirants, Rivas, Jerez, and Salazar, united to defeat the foreigner, resorting to the trickery and violence inseparable from early Central American politics; but they suffered a crushing defeat at the polls, where Walker received 15,835 of 23,236 votes cast. He was inaugurated on the twelfth of July, appointed a cabinet consisting chiefly of his native adherents, and, rid of his puppet, Rivas, entered upon the administration of public affairs. Strangely enough, he received prompt recognition from his old enemy, Secretary Marcy, who, under the impression that Rivas still held office, di-

rected Minister Wheeler to tender to the existing government the good wishes of the United States. Nor did the fact that Wheeler obeyed his instructions to the letter prevent his sacrifice upon the altar of Marcy's wrath when the blunder came to light.

An allied force from Guatemala, Honduras and San Salvador, instigated by Rivas and his friends, invaded the northern departments; by the first of July they had possession of Leon, which they used as a base of operation against foraging parties from Granada. Masaya fell soon afterwards, and the allies took up an almost impregnable position on the crest of a volcanic mount above the rock-bound lake. From this eyrie they harassed the surrounding country, until Walker, weary of their incessant activity, resolved to attack and disperse them. On the morning of the eleventh of October he left Granada with eight hundred men, marched upon Masaya, reached the suburbs of the town late in the evening, and bivouacked for the night. Early in the morning the attack was begun, under cover of a heavy howitzer fire, the enemy falling back and finally abandoning the main plaza to the assailing force, but retaining possession of two other plazas and the intervening houses. Walker then resorted to tactics peculiar to Central American warfare. Directing a heavy artillery fire upon the besieged, he

set sappers to work cutting through the adobe house walls. Slowly but surely the filibusters closed in upon the enemy, and when night fell it seemed that the morrow would see the red-starred flag of Nicaragua floating over Masaya.

Meanwhile Zavala and eight hundred Serviles, making a forced march from Diriomio, a small village about fifteen miles south of the capital, entered Granada, confident of meeting with little resistance from the scanty garrison. But they were destined to learn more of American courage and military efficiency. A hundred and fifty filibusters, most of them invalids, assisted by a few civilians, occupied the church, armory, and hospital, and offered a desperate resistance. Zavala, repulsed again and again, revenged himself upon helpless non-combatants who had trusted to their neutral character to protect them. The American minister's house was attacked; three of his countrymen were massacred; and several neutral natives, knowing their compatriots, saved themselves by flight. For twenty-one hours a constantly increasing force of assailants maintained the siege, their frequent demands for surrender and threats of death in the event of refusal being met by cries of defiance from the garrison. At night a courier from the beleaguered adventurers made his way through the encircling foe, only to meet Walker's forces rapidly returning to

the rescue. News had reached them of the attack upon Granada, and their leader, although loath to relinquish an assured victory, had immediately turned back. The ensuing fight was brief but decisive. Checked for a time by a powerful battery placed to command the narrow roadway, Walker made a stirring appeal to his men, who in response dashed forward in a desperate charge, driving the enemy before them like dust before a storm. A detachment detailed for the purpose cut off the retreat of the allies, and of Zavala's army barely half escaped. Four hundred had fallen at Masaya, four hundred fell at Granada, while Walker's total loss in killed and wounded did not exceed one hundred.

This engagement discouraged the allies, and for a time they ceased their pernicious activity. But early in November General Hornsby, who had been sent to Virgin Bay with a small force of men, made an unsuccessful attack upon General Cañas, who, at the head of eight hundred Costa Ricans, had landed at San Juan del Sur and threatened the re-established Transit. Thereupon Walker and Henningsen, a recent accession to the filibusters' ranks, left Granada with two hundred and fifty troops, reached Virgin Bay on the afternoon of the eleventh, and early next morning attacked Cañas, driving him in disorder

through San Juan del Sur and along the coast trail to Rivas, where he was left secure behind his barricades.

During this period of constant military activity, various changes were made in the constitution and laws of the country. Most of these were of a nature calculated to increase and perpetuate the power of the Americans; they culminated, on September twenty-second, in the promulgation of a decree annulling the Act of the Federal Constituent Assembly of April seventeenth, 1824, by which slavery had been abolished. This attempt to re-establish an obsolete system, which was regarded with fear and repulsion by a large portion of the population, was largely instrumental in bringing about the downfall of the filibusters' ephemeral empire.

The reappearance of Costa Rican soldiery in the vicinity of the Transit menaced Walker's communication with the United States, and induced him to abandon Granada and concentrate his forces farther south. That the enemy might not suspect his purpose, he again attacked Masaya, marching upon it from Granada with three hundred men, while two hundred and fifty infantry under Colonel Jacques sailed for Virgin Bay to reinforce Colonel Markham. The assault occurred on the fifteenth of November, the allies resigning

the suburbs to the Americans and falling back into the heart of the town. Fighting continued until midnight of the seventeenth, when the filibusters withdrew to Granada, and sailed two days later for the island of Ometepe, leaving Henningsen with a small force to destroy the city they had held so long.

The siege, defence, and destruction of Granada was one of the most remarkable achievements chronicled in the annals of irregular warfare. Surrounded by an enemy four thousand strong, four hundred and nineteen resolute Americans held out for eighteen days, destroying the city and gradually fighting their way to the lake. Scarcely had Walker left on his way southward, when Henningsen began firing the houses of the town. Huge columns of smoke told the allies that the work of destruction had begun, and gave the signal for a desperate assault. The Church of the Guadalupe was carried, and from its massive walls sharpshooters kept up a galling fire upon the filibusters. So fatal were its effects that on the twenty-seventh, three days after fighting had begun, the church was stormed, taken, and transformed into a fortress by the Americans. Meanwhile the town was reduced to ashes and Henningsen began throwing up a continuous line of earthworks toward the lake, moving his sick and wounded with him and leaving seventy

men to garrison the church. Cholera, typhus, and the enemy's bullets had swept off scores; ammunition for the howitzers ran short; no relief was in sight, but still the little band held out. On the twelfth of December the last provisions were consumed, and Henningsen sent a messenger to Walker asking for the relief which, unknown to him, was approaching. That night the lake steamer "La Virgen" landed Colonel Watters with a hundred and sixty men, who fought their way past four barricades into Henningsen's lines and helped him to cut a passage to the lake shore. One hundred and sixty-six survivors of the four hundred and nineteen men charged with the destruction of Granada embarked on the morning of the fourteenth, leaving the baffled allies to enter a wilderness of smoking ruins, over which floated a banner significantly inscribed, "Aquí fué Granada"—"Here was Granada!"

Upon the junction of Walker's and Henningsen's forces in the Meridional Department the allies abandoned the southern part of the country and concentrated their troops at Masaya, leaving Walker free to possess himself of Rivas on the eleventh of December, 1856. The Americans were thus in direct communication with the United States, and could obtain recruits and munitions of war as long as the Transit Company's steamers were run. But

an adventurer named Spencer, a tool of the implacable Vanderbilt, descended the San Carlos and San Juan rivers with a hundred and twenty Costa Ricans, surprised and defeated a party of Americans at the mouth of the Sarapiqui, possessed himself of Greytown and the Transit's Company's steamers, and finally, reënforced by eight hundred Costa Rican troops, made himself master of the entire San Juan valley. He also captured both lake steamers, thus securing control of the lake and preventing any sudden movement of the filibusters by water.

Numerous attempts to regain control of the river were made during the first few months of 1857, by parties of recruits from the United States, but without avail. Colonel Lockridge and Colonel Titus, with four hundred and twenty men, attacked and routed the Costa Ricans at the mouth of the Sarapiqui, and Titus continued to Castillo, the surrender of which he demanded. But negotiations were prolonged by the beleaguered garrison until reënforcements arrived, when Titus incontinently fled. A subsequent advance by Lockridge ended in failure; and the San Juan valley was left in possession of Walker's enemies.

Meanwhile the allies had been drawing their lines closer about Rivas, where the Democratic forces now lay besieged. Recruits continued to

arrive by way of San Juan del Sur, but in numbers insufficient to maintain the strength of an army suffering constant depletion from death and desertion. Several sorties by the Americans were repulsed with loss, ammunition and food became scarce, and the allies, now some seven thousand strong, were constantly strengthening their position. On the sixteenth of March four hundred men, led by Walker himself, attacked San Jorge, held by twenty-five hundred Costa Ricans. Despite a desperate display of courage, they were driven back upon a party of the enemy which had attacked Rivas during their absence, and of whose proximity they were ignorant. A sudden blaze of musketry from a house by the wayside was their first intimation of a foe in the rear; and in the vain assault which followed many a filibuster met his fate. The shattered column reached Rivas at daybreak, having lost sixty or seventy men.

This was the last action in which the Americans were the aggressors. A week later the allies made a general attack, but were repulsed with loss by the dwindling Democratic garrison, whose scanty diet of horse and mule meat does not seem to have impaired their courage. But evacuation of the town became imperative. The Transit route to the eastward had long been closed against their reënforcements, and

the San Francisco steamers, without which neither recruits nor supplies could reach them, were now withdrawn. Mr. Vanderbilt had triumphed, and the filibuster was constrained to accede to the demands of Captain C. H. Davis, of the U. S. S. "St. Mary's," lying at San Juan del Sur, that he surrender himself and his men to the United States, under promise of protection to his native auxiliaries and a passage to Panama for himself and his American and foreign adherents. With this agreement, consummated May first, 1857, Walker's career as a controlling factor in Central American affairs ceased.

Walker entered a formal protest against the action of the United States in forcibly removing him from a country whose legal president he was; and he straightway proceeded with preparations for regaining his lost ascendancy. In spite of strict surveillance he organized an expedition of veterans, and reached Greytown in safety. He went into camp to await the arrival of expected reënforcements, while Colonel Anderson, with a small detachment, attacked and captured Castillo, and obtained possession of several river steamers. But the arrival at Greytown of Commodore Paulding with the U. S. S. "Wabash" abruptly terminated the campaign so auspiciously begun. The filibusters were again forcibly deported to the United States, where

Walker was tried for violating the neutrality laws, and promptly acquitted.

Early in August, 1860, Walker, prevented by British and American cruisers from reaching Greytown, landed with about a hundred men on the east coast of Honduras,—a state of the hostile coalition which had brought about his overthrow,—intending to fight his way to Nicaragua. It is doubtful whether he could have succeeded, even had foreign intervention been lacking, for the disaffected natives, upon whose aid he relied, would probably have failed him; but the ubiquitous English man-of-war struck the last and fatal blow. Hardly had Truxillo fallen before the adventurers, when the "Icarus" appeared in port, and her commander, Captain Salmon, demanded their surrender, threatening to open fire upon the town in the event of refusal. Menaced by the guns of the "Icarus," and hard pressed by seven hundred Honduran troops, Walker determined upon evacuation, which was accomplished at midnight of the twenty-first of August. But relentless fate pursued him, in the shape of the British warship. On the third of September he surrendered to her commander, who twice assured him that he was surrendering to the English forces, but who nevertheless delivered him to the Honduran authorities. The court-martial which followed could have but one result. Condemned to die

by the fusillade, he met his end with the calmness and fortitude which ever characterized him in misfortune. The usual volley laid him writhing on the ground, whereupon a soldier stepped forward and, placing the muzzle of his musket at the victim's head, administered the *coup de grâce*.

Thus died, in his thirty-seventh year, William Walker, "the gray-eyed man of destiny," who, had he received from his native land the treatment to which he deemed himself entitled, would probably have achieved his ideal of a slave-owning Central American Empire.

CHAPTER XIV

NARRATIVE — MANAGUA TO CORINTO

ON Monday morning, the third of October, we left Granada for Managua, travelling over the eastern division of the Nicaragua National Railway, a narrow-gauge road owned and operated by the Government. The country traversed was less broken than that about Rivas, and seemed to us uninteresting although rich and productive. Masaya, the only considerable town through which we passed, is an interesting place populated principally by Indians. These live in little, one-storied, palm-thatched houses built of bamboo plastered with mud, and half hidden in gardens and orchards. Because of the tract of ground surrounding each house, the town covers a large area ; it is quite unlike the usual Central American city, in which numerous buildings of a single type, joining one another with no visible line of demarcation, produce the effect of a few enormous edifices, each covering an entire block. The centre of the plaza, contrary to custom, is occupied by an old Spanish church, probably situated upon the spot where Gil

Gonzales de Avila repulsed the attack of the treacherous Diriangan. The Spaniards, greatly outnumbered, owed their escape to the Indians' preference for capturing their foes alive and to the terror inspired by the horsemen, whose charges the natives could not withstand.

Near the town and far below it is a deep, clear lake about three miles long, surrounded by vertical cliffs rising 360 or more feet above its surface. Although without an outlet, the water is fresh, and furnishes the supply for the adjacent town, to which it is transported in earthen jars, as it was centuries ago, by *aguadoras*, or water-carriers — women and girls trained to the task from infancy. On the west shore of the lake rises the cone of the volcano of Masaya, which, with the lake, occupies an oval area of depression about six miles long and four miles wide, where a large volcanic mountain, since destroyed by engulfment, once stood. The present peak is 2,200 feet high, and has been inactive since 1858, when it emitted a flow of lava. At the time of the conquest its vent was filled with a sea of molten matter, thought by the Spaniards to be gold; and in 1534, Fray Blas de Castillo, more courageous or more covetous than his fellows, made two descents into the crater, lowering a bucket at the end of a chain in a vain attempt to procure some of the precious metal. The bucket melted



THE VOLCANO MOMOTOMBO.

the moment it touched the lava, and the Fray was drawn up half dead from sulphurous fumes and empty-handed. "This matter," he says, "resembles a red sea, and its commotions make as much noise as do the waves of the ocean when they dash against the rocks. This sea looks like the metal of which bells are made, or sulphur or gold, in a state of fusion, except that it is covered with a black scum two or three fathoms thick. Were it not for this mass of scum, or scoriae, the fire would throw out such an ardor and lustre that it would be impossible to remain near it, or look upon it. Sometimes it breaks apart in certain places, and then one can perceive the matter, red and brilliant as the light of heaven. In the midst constantly rise two large masses of melted metal, four or five fathoms across, which are constantly free from the scum, and from which the liquid metal leaps forth on every side. The sound of these melted streams, dashing amongst the rocks, is like that of artillery battering the walls of a city. The rocks around this sea of metal are black to the height of seven or eight fathoms, which proves that the liquid matter sometimes rises to that distance. Upon the north-eastern side of the crater is the opening of a cavern, very deep, and as wide as the range of an arquebus. A stream of burning fluid flows into this cavern, which seems to be the outlet of the crater. It

runs for a few moments, stops, then commences again, and so on constantly. There comes forth from this cavern a thick smoke, greater than rises from the whole lake, which diffuses on all sides a very strong odor. There comes forth also a heat and brilliancy which cannot be described. During the night the summit of the mountain is perfectly illuminated, as are also the clouds, which seem to form a kind of *tiara* above it, which may be seen eighteen or twenty leagues on the land, and upwards of thirty at sea. The darker the night the more brilliant the volcano. It is worthy of remark that neither above nor below can the least flame be seen, except when a stone or arrow is thrown into the crater, which burns like a candle.

"During rains and tempests the volcano is most active; for when the storm reaches its height, it makes so many movements that one might say it was a living thing. The heat is so great that the rain is turned into vapor before reaching the bottom of the crater, and entirely obscures it. Both Indians and Spaniards affirm that since the conquest, during a very rainy year, the burning metal rose to the top of the crater, and that the heat was then so great that everything was burnt for a league around. Such a quantity of burning vapor came from it that the trees and plants were dried up for more than two leagues. Indeed,

one cannot behold the volcano without fear, admiration, and repentance of his sins; for it can be surpassed only by the eternal fire. Some confessors have imposed no other penance than to visit this volcano."

Reaching Managua in the middle of the forenoon we drove to Lupone's, an excellent hotel kept by Europeans, and after establishing ourselves comfortably, we set out to see the town. It is finely situated upon gently sloping ground on the southern shore of Lake Managua, and is regularly laid out and substantially built. Its population is estimated at about ten thousand. A fine church, a large market, and a block of public buildings consisting of offices, barracks, and the President's palace are the chief objects of interest. We ordered saddle-horses, intending to ride to Lake Tiscapa, a sheet of water occupying the crater of an extinct volcano near the town; but a sudden and violent storm necessitated a change in our plans, and we passed the afternoon sitting at the door of our room, watching passers-by ford the muddy torrent which coursed down the street. An epidemic of contagious fever was raging, and, with visions of possible quarantine before us, we resolved to push on to Corinto the following day.

Embarking early in the morning upon a small steamer, we were soon speeding over the

quiet waters of the lake. To our left a succession of dark volcanic peaks, their summits rounded by the storms of centuries, rose clothed in green, against an azure sky; to the right, beyond the broad expanse of lake, a hazy strip of blue marked the Matagalpa hills.

Upon rounding a precipitous promontory to the left, we beheld the lofty peak of Momotombo twenty miles before us, its little plume of smoke and steam floating away to leeward. As we approached we could see cattle grazing on broad sloping *potreros* around its base, while above a belt of vegetation gradually diminishing as the altitude increased, bare, precipitous, sulphur-stained slopes of ash rose to the smoking summit.

Bubbles of steam burst at the surface of the lake near shore, and dim wreaths of vapor hung over portions of the surrounding country, reminders of the *mal país*, or bad lands, which occur extensively throughout the *Cordillera de los Marabios*, "extending, in some cases, for leagues in every direction. The lava current in places seems to have spread out in sheets, flowing elsewhere, however, in high and serpentine ridges, resembling Cyclopean walls, often capriciously inclosing spaces of arable ground, in which vegetation is luxuriant; these are called by the natives *corrales*, yards. Hot springs, and openings in the ground emitting

hot air, smoke, and steam, called *infernales*, are common around the bases of these volcanoes. For large spaces the whole ground seems resting upon a boiling cauldron, and is encrusted with mineral deposits. There are also many places where the ground is depressed and bare, resembling a honeycombed, ferruginous clay-pit, from which sulphurous vapors are constantly rising, destroying vegetation in the vicinity, but especially to the leeward, where they are carried by the wind. By daylight nothing is to be seen at these places, except a kind of tremulous motion of the heated atmosphere near the surface of the ground. But at night the whole is lighted by a flickering, bluish, and ethereal flame, like that of burning spirits, which spreads at one moment over the whole surface, at the next shoots up into high spires, and then diffuses itself again, in a strange unearthly manner. This is called by the *gente del campo*, the people of the fields, *la baile de los demonios*, the dance of the devils."¹

We passed between the volcano and its extinct and crumbling prototype Momotombito, and landed at a small wharf whence the western division of the National Railway runs to Leon, Chinandega and Corinto. A train was awaiting us, and we were soon rolling through a monotonous country, which flurries of rain

¹ Squier's "Nicaragua." D. Appleton & Co., 1852.

from the fast gathering clouds partially blotted from view. At Leon it rained heavily, and we caught a mere glimpse, from the window, of muddy, wind-swept streets and rows of white-washed houses. Rolling on through a sodden country in the gathering darkness, we passed Chinandega, a large and important Indian town; and finally, crossing a long bridge, ran along a beach upon which rows of ghostly breakers were dimly visible, and entered Corinto. We picked our way through the mud to the hotel, dined, and soon turned in, fatigued by our long day's ride.

When we awoke in the morning, the world was bathed in sunshine, and, stepping out upon the broad veranda I gazed over the harbor, its blue waters ruffled by a breath of wind from the sea. A big white bark flying the German flag lay near by, and beyond was the "Mombombo," a small Nicaraguan steamer classed as a man-of-war in virtue of two field-pieces mounted on her spar deck. Far to the left a range of dim blue peaks was barely visible against the sky, and to the right, beyond a low bare point, the broad Pacific stretched as far as eye could reach. Below us was a street running parallel to the beach; it was lined on the landward side with neat frame buildings and a wooden Government building, containing custom house, barracks, and officers' quarters.



THE WATER FRONT, CORINTO.

Corinto, the chief seaport of Nicaragua, is situated near the site of the old town of Realejo, whose successor it virtually is. Founded at a time when the depredations of buccaneers spread terror along the coast, Realejo sought, in a sequestered location on the Rio Realejo, five miles from the ocean, the inaccessibility which is now injurious to it, and which has resulted in its commercial decay and the growth of its rival, Corinto. The latter town is built upon a flat, sandy island, producing little but grass and cocoanut palms, and contains a population of about twelve hundred.

A short tour of exploration after breakfast satisfied us that there was little of interest in the place; during the remainder of our stay we were therefore content to sit upon the hotel veranda talking or reading, and to walk occasionally to the harbor mouth to bathe in the surf. I devoted much time to a study of a new schedule of duties which had just gone into effect, and I was edified to learn that diamonds might be imported upon payment of fourteen and a half dollars a pound, while pearls were taxed three dollars and sixty-three cents a pound, and clocks thirty-six cents a pound.

On the seventh of October, three days after we reached Corinto, the Pacific Mail Steamship "Colon" arrived, and, having provided ourselves with the necessary passport to leave

the country, we embarked for Panama. It was late in the afternoon before the last freight was loaded and the anchor weighed. With a hoarse whistle of farewell the great steamer moved slowly down the channel, past the lighthouse which marks the harbor mouth, and out to sea. The broad Pacific rocked her on its bosom, the evening mists closed in about her, and land was lost to sight. The purple hills and sunny plains of Nicaragua became a memory of the past ; our hardships were all forgotten, our pleasures magnified an hundredfold. Around us was the sleeping ocean, ahead the Bay of Panama, beyond that, home !

APPENDIX

APPENDIX

GREAT BRITAIN—INTEROCEANIC SHIP-CANAL

Convention between the United States and Great Britain for facilitating and protecting the Construction of a Ship-Canal between the Atlantic and Pacific oceans, and for other purposes.

Concluded April 19, 1850.
Ratification advised by the Senate May 22, 1850.
Ratified by the President May 23, 1850.
Ratified by Her Britannic Majesty June 11, 1850.
Ratifications exchanged July 4, 1850.
Proclaimed July 5, 1850.

BY THE PRESIDENT OF THE UNITED STATES OF
AMERICA

A PROCLAMATION

WHEREAS a Convention between the United States of America and Her Britannic Majesty, for facilitating and protecting the construction of a Ship-Canal between the Atlantic and Pacific oceans, and for other purposes, was concluded and signed at Washington, on the nineteenth day of April last, which Convention is, word for word, as follows:

Convention between the United States of America and Her Britannic Majesty.

The United States of America and Her Britannic Majesty, being desirous of consolidating the relations of amity which

so happily subsist between them, by setting forth and fixing in a convention their views and intentions with reference to any means of communication by Ship-Canal which may be constructed between the Atlantic and Pacific oceans, by the way of the river San Juan de Nicaragua, and either or both of the lakes of Nicaragua or Managua, to any port or place on the Pacific ocean ; the President of the United States has conferred full powers on John M. Clayton, Secretary of State of the United States ; and Her Britannic Majesty on the Right Honorable Sir Henry Lytton Bulwer, a Member of Her Majesty's Most Honorable Privy Council, Knight Commander of the Most Honorable Order of the Bath, and Envoy Extraordinary and Minister Plenipotentiary of Her Britannic Majesty to the United States, for the aforesaid purpose ; and the said plenipotentiaries having exchanged their full powers, which were found to be in proper form, have agreed to the following articles :

ARTICLE I.

The Governments of the United States and Great Britain hereby declare, that neither the one nor the other will ever obtain or maintain for itself any exclusive control over the said Ship-Canal ; agreeing, that neither will ever erect or maintain any fortifications commanding the same, or in the vicinity thereof, or occupy, or fortify, or colonize, or assume or exercise any dominion over Nicaragua, Costa Rica, the Mosquito coast, or any part of Central America ; nor will either make use of any protection which either affords or may afford, or any alliance which either has or may have, to or with any State or People, for the purpose of erecting or maintaining any such fortifications, or of occupying, fortifying, or colonizing Nicaragua, Costa Rica, the Mosquito coast, or any part of Central America, or of assuming or exercising dominion over the same ; nor will the United States or Great Britain take advantage of any intimacy, or use any alliance, connexion or influence that either may possess with any State or Government through whose territory

the said canal may pass, for the purpose of acquiring or holding, directly or indirectly, for the citizens or subjects of the one, any rights or advantages in regard to commerce or navigation through the said canal, which shall not be offered on the same terms to the citizens or subjects of the other.

ARTICLE II.

Vessels of the United States or Great Britain, traversing the said canal, shall, in case of war between the contracting parties, be exempted from blockade, detention or capture, by either of the belligerents ; and this provision shall extend to such a distance from the two ends of the said canal, as may hereafter be found expedient to establish.

ARTICLE III.

In order to secure the construction of the said canal, the contracting parties engage, that if any such canal shall be undertaken upon fair and equitable terms by any parties having the authority of the local government or governments, through whose territory the same may pass, then the persons employed in making the said canal, and their property used, or to be used, for that object, shall be protected, from the commencement of the said canal to its completion, by the Governments of the United States and Great Britain, from unjust detention, confiscation, seizure or any violence whatsoever.

ARTICLE IV.

The contracting parties will use whatever influence they respectively exercise, with any State, States or Governments possessing, or claiming to possess, any jurisdiction or right over the territory which the said canal shall traverse, or which shall be near the waters applicable thereto, in order to induce such States or Governments to facilitate the construction of the said canal by every means in their power. And furthermore, the United States and Great Britain agree to use their good offices, wherever or however it may be most expedient,

in order to procure the establishment of two free ports, one at each end of the said canal.

ARTICLE V.

The contracting parties further engage, that when the said canal shall have been completed, they will protect it from interruption, seizure or unjust confiscation, and that they will guarantee the neutrality thereof, so that the said canal may forever be open and free, and the capital invested therein, secure. Nevertheless, the Governments of the United States and Great Britain, in according their protection to the construction of the said canal, and guaranteeing its neutrality and security when completed, always understand that this protection and guarantee are granted conditionally, and may be withdrawn by both governments, or either government, if both governments, or either government, should deem that the persons or company undertaking or managing the same adopt or establish such regulations concerning the traffic thereupon, as are contrary to the spirit and intention of this Convention, either by making unfair discriminations in favor of the commerce of one of the contracting parties over the commerce of the other, or by imposing oppressive exactions or unreasonable tolls upon passengers, vessels, goods, wares, merchandise or other articles. Neither party, however, shall withdraw the aforesaid protection and guarantee without first giving six months' notice to the other.

ARTICLE VI.

The contracting parties in this Convention engage to invite every State with which both or either have friendly intercourse, to enter into stipulations with them similar to those which they have entered into with each other; to the end, that all other States may share in the honor and advantage of having contributed to a work of such general interest and importance as the canal herein contemplated. And the contracting parties likewise agree, that each shall enter into treaty stipulations with such of the Central American States,

as they may deem advisable, for the purpose of more effectually carrying out the great design of this Convention, namely, that of constructing and maintaining the said canal as a ship-communication between the two oceans for the benefit of mankind, on equal terms to all, and of protecting the same ; and they also agree, that the good offices of either shall be employed, when requested by the other, in aiding and assisting the negotiation of such treaty stipulations ; and should any differences arise as to right or property over the territory through which the said canal shall pass between the States or Governments of Central America, and such differences should in any way impede or obstruct the execution of the said canal, the Governments of the United States and Great Britain will use their good offices to settle such differences in the manner best suited to promote the interests of the said canal, and to strengthen the bonds of friendship and alliance which exist between the contracting parties.

ARTICLE VII.

It being desirable that no time should be unnecessarily lost in commencing and constructing the said canal, the Governments of the United States and Great Britain determine to give their support and encouragement to such persons or company as may first offer to commence the same, with the necessary capital, the consent of the local authorities, and on such principles as accord with the spirit and intention of this Convention ; and if any persons or company should already have, with any State through which the proposed Ship-Canal may pass, a contract for the construction of such a canal as that specified in this Convention, to the stipulations of which contract neither of the contracting parties in this Convention have any just cause to object ; and the said persons or company shall, moreover, have made preparations, and expended time, money, and trouble, on the faith of such contract, it is hereby agreed, that such persons or company shall have a priority of claim, over every other person, persons, or company, to the protection of the

Governments of the United States and Great Britain, and be allowed a year, from the date of the exchange of the ratifications of this Convention, for concluding their arrangements, and presenting evidence of sufficient capital subscribed to accomplish the contemplated undertaking; it being understood that if, at the expiration of the aforesaid period, such persons or company be not able to commence and carry out the proposed enterprise, then the Governments of the United States and Great Britain shall be free to afford their protection to any other persons or company that shall be prepared to commence and proceed with the construction of the canal in question.

ARTICLE VIII.

The Governments of the United States and Great Britain having not only desired, in entering into this convention, to accomplish a particular object, but also to establish a general principle, they hereby agree to extend their protection, by treaty stipulations, to any other practicable communications, whether by canal or railway, across the isthmus which connects North and South America; and especially to the interoceanic communications, should the same prove to be practicable, whether by canal or railway, which are now proposed to be established by the way of Tehuantepec or Panama. In granting, however, their joint protection to any such canals or railways as are by this article specified, it is always understood by the United States and Great Britain that the parties constructing or owning the same shall impose no other charges or conditions of traffic thereupon than the aforesaid governments shall approve of, as just and equitable; and that the same canals or railways, being open to the citizens and subjects of the United States and Great Britain on equal terms, shall also be open on like terms to the citizens and subjects of every other State which is willing to grant thereto such protection as the United States and Great Britain engage to afford.

ARTICLE IX.

The ratifications of this Convention shall be exchanged at Washington within six months from this day, or sooner if possible.

In faith whereof, we, the respective plenipotentiaries have signed this Convention, and have hereunto affixed our seals.

Done at Washington, the nineteenth day of April, Anno Domini one thousand eight hundred and fifty.

JOHN M. CLAYTON, [L. S.]
HENRY LYTTON BULWER. [L. S.]

And whereas the said Convention has been duly ratified on both parts, and the respective ratifications of the same were exchanged at Washington, on the fourth instant, by John M. Clayton, Secretary of State of the United States, and the Right Honorable Sir Henry Lytton Bulwer, Envoy Extraordinary and Minister Plenipotentiary of Her Britannic Majesty, on the part of their respective Governments:

Now, therefore, be it known, that I, Zachary Taylor, President of the United States of America, have caused the said Convention to be made public, to the end that the same, and every clause and article thereof, may be observed and fulfilled with good faith by the United States and the citizens thereof.

In witness whereof, I have hereunto set my hand, and caused the seal of the United States to be affixed.

Done at the city of Washington, this fifth day of July, in the year of our Lord one thousand [L. S.] eight hundred and fifty, and of the Independence of the United States the seventy-fifth.

Z. TAYLOR.

By the President:

J. M. CLAYTON,
Secretary of State.

INTEROCEANIC CANAL

Message from the President of the United States, transmitting a convention between the United States and Great Britain, to facilitate the construction of a ship-canal to connect the Atlantic and Pacific oceans, signed at Washington, November 18, 1901.

DECEMBER 4, 1901.—Read; treaty read the first time and referred to the Committee on Foreign Relations and, together with the message, ordered to be printed in confidence for the use of the Senate.

DECEMBER 9, 1901.—Injunction of secrecy removed.

To the Senate:

I transmit, for the advice and consent of the Senate, to its ratification, a convention signed November 18, 1901, by the respective Plenipotentiaries of the United States and Great Britain to facilitate the construction of a ship canal to connect the Atlantic and Pacific oceans by whatever route may be considered expedient, and to that end to remove any objection which may arise out of the convention of April 19, 1850, commonly called the Clayton-Bulwer treaty, to the construction of such canal under the auspices of the Government of the United States, without impairing the "general principle" of neutralization established in Article VIII. of that convention.

I also inclose a report from the Secretary of State, submitting the convention for my consideration.

THEODORE ROOSEVELT.

WHITE HOUSE,

WASHINGTON, December 4, 1901.

The President:

I submit for your consideration and for transmission to the Senate, should you deem it proper to do so, with a view to obtaining the advice and consent of that body to its ratification, a convention signed November 18, 1901, by the respective Plenipotentiaries of the United States and Great Britain to facilitate the construction of a ship canal to connect the Atlantic and Pacific oceans by whatever route may be considered expedient, and to that end to remove any objection which may arise out of the convention of April 19, 1850, commonly called the Clayton-Bulwer treaty, to the construction of such canal under the auspices of the Government of the United States, without impairing the "general principle" of neutralization established in Article VIII. of that convention.

Respectfully submitted.

JOHN HAY.

DEPARTMENT OF STATE,
WASHINGTON, December 2, 1901.

The United States of America and His Majesty Edward the Seventh, of the United Kingdom of Great Britain and Ireland, and of the British Dominions beyond the Seas, King, and Emperor of India, being desirous to facilitate the construction of a ship canal to connect the Atlantic and Pacific Oceans, by whatever route may be considered expedient, and to that end to remove any objection which may arise out of the Convention of the 19th April, 1850, commonly called the Clayton-Bulwer Treaty, to the construction of such canal under the auspices of the Government of the United States, without impairing the "general principle" of neutralization established in Article VIII. of that Convention, have for that purpose appointed as their Plenipotentiaries :

The President of the United States, John Hay, Secretary of State of the United States of America ;

And His Majesty Edward the Seventh, of the United Kingdom of Great Britain and Ireland, and of the British Dominions beyond the Seas, King, and Emperor of India, the Right Honourable Lord Pauncefote, G. C. B., G. C. M. G., His Majesty's Ambassador Extraordinary and Plenipotentiary to the United States;

Who, having communicated to each other their full powers which were found to be in due and proper form, have agreed upon the following Articles :

ARTICLE I.

The High Contracting Parties agree that the present Treaty shall supersede the afore-mentioned Convention of the 19th April, 1850.

ARTICLE II.

It is agreed that the canal may be constructed under the auspices of the Government of the United States either directly at its own cost, or by gift or loan of money to individuals or Corporations, or through subscription to or purchase of stock or shares, and that, subject to the provisions of the present Treaty, the said Government shall have and enjoy all the rights incident to such construction, as well as the exclusive right of providing for the regulation and management of the canal.

ARTICLE III.

The United States adopts, as the basis of the neutralization of such ship canal, the following Rules, substantially as embodied in the Convention of Constantinople, signed the 28th October, 1888, for the free navigation of the Suez Canal, that is to say:

1. The canal shall be free and open to the vessels of commerce and of war of all nations observing these Rules, on terms of entire equality, so that there shall be no discrimination against any such nation, or its citizens or subjects, in respect of the conditions or charges of traffic, or otherwise.

Such conditions and charges of traffic shall be just and equitable.

2. The canal shall never be blockaded, nor shall any right of war be exercised nor any act of hostility be committed within it. The United States, however, shall be at liberty to maintain such military police along the canal as may be necessary to protect it against lawlessness and disorder.

3. Vessels of war of a belligerent shall not revictual nor take any stores in the canal except so far as may be strictly necessary ; and the transit of such vessels through the canal shall be effected with the least possible delay in accordance with the Regulations in force, and with only such intermission as may result from the necessities of the service.

Prizes shall be in all respects subject to the same rules as vessels of war of the belligerents.

4. No belligerent shall embark or disembark troops, munitions of war, or warlike materials in the canal, except in case of accidental hindrance of the transit, and in such case the transit shall be resumed with all possible dispatch.

5. The provisions of this Article shall apply to waters adjacent to the canal, within 3 marine miles of either end. Vessels of war of a belligerent shall not remain in such waters longer than twenty-four hours at any one time, except in case of distress, and in such case shall depart as soon as possible ; but a vessel of war of one belligerent shall not depart within twenty-four hours from the departure of a vessel of war of the other belligerent.

6. The plant, establishments, buildings, and all works necessary to the construction, maintenance, and operation of the canal shall be deemed to be part thereof, for the purposes of this Treaty, and in time of war, as in time of peace, shall enjoy complete immunity from attack or injury by belligerents, and from acts calculated to impair their usefulness as part of the canal.

ARTICLE IV.

It is agreed that no change of territorial sovereignty or of international relations of the country or countries traversed by

the before-mentioned canal shall affect the general principle of neutralization or the obligation of the High Contracting Parties under the present Treaty.

ARTICLE V.

The present Treaty shall be ratified by the President of the United States, by and with the advice and consent of the Senate thereof, and by His Britannic Majesty; and the ratifications shall be exchanged at Washington or at London at the earliest possible time within six months from the date hereof.

In faith whereof the respective Plenipotentiaries have signed this Treaty and hereunto affixed their seals.

Done in duplicate at Washington, the 18th day of November, in the year of Our Lord one thousand nine hundred and one.

JOHN HAY. [SEAL.]
PAUNCEFOTE. [SEAL.]

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